RICOH

Digital Camera

RDC-2

Operation Manual

Before using your digital camera, read this manual carefully to understand the proper use of the camera. Please keep this manual handy for easy reference.

Introduction

Thank you for purchasing the Ricoh RDC-2 Digital Camera.
This manual contains instructions on the proper use of your camera as well as necessary as handling precautions. Read this manual carefully to understand the proper use of the camera. Please keep this manual handy for easy reference.

- Ricoh Co., Ltd.

Testing the camera
Test the camera by taking several sample pictures to confirm that the pictures are correctly recorded.

Respecting copyrights
Reproduction or alteration of copyrighted documents, magazines and music, other than for personal or family use or to a similarly limited extent, without the consent of the author, is prohibited.

About digital audiovisual files
We regret that we cannot be responsible for files lost due to any malfunction of the camera or any failure of a memory card.

About the warranty
This product is made to local specifications. Should it malfunction while you are abroad, we cannot be responsible for the cost or availability of servicing in other countries.
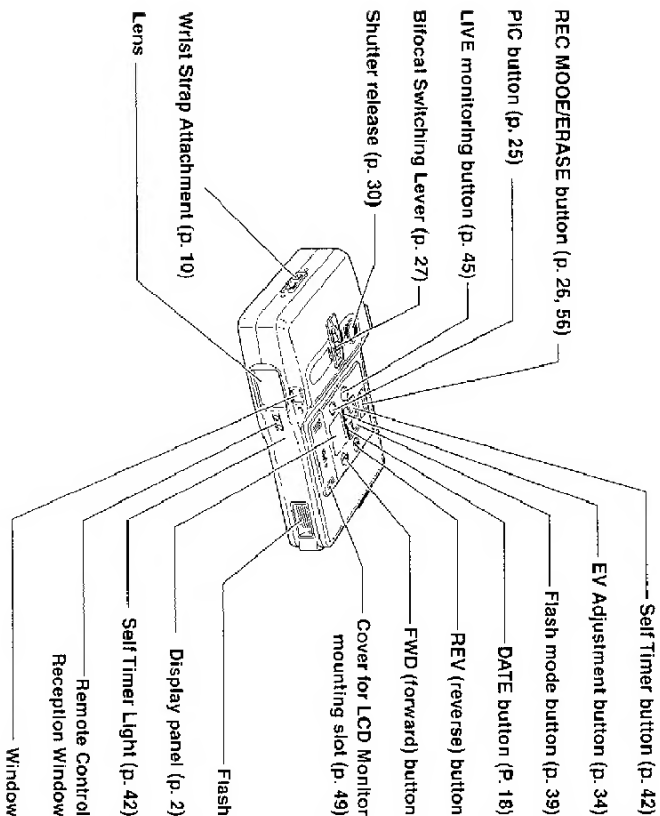
Radio-frequency interference
Using the digital camera near electronic devices could inhibit the performance of both the camera and nearby devices. Interference is likely to occur when the camera is placed near a radio or television. If such occurs, complete the following proceedures:

- Reloacted the camera as far as possible from the interference source.
- Change the orientation of the radio or television antenna.
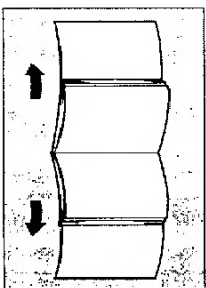- Plug the camera into a different electrical outlet.

Camera Description (1)

■ Camera Body

- Self Timer button (p. 42)
- EV Adjustment button (p. 34)
- Flash mode button (p. 39)
- DATE button (P. 18)
- REV (reverse) button
- FWD (forward) button
- Cover for LCD Monitor mounting slot (p. 49)
- Flash
- Display panel (p. 2)
- Self Timer Light (p. 42)
- Remote Control Reception Window
- Window

- REC MODE/ERASE button (p. 26, 56)
- PIC button (p. 25)
- LIVE monitoring button (p. 45)
- Bifocal Switching Lever (p. 27)
- Shutter release (p. 30)
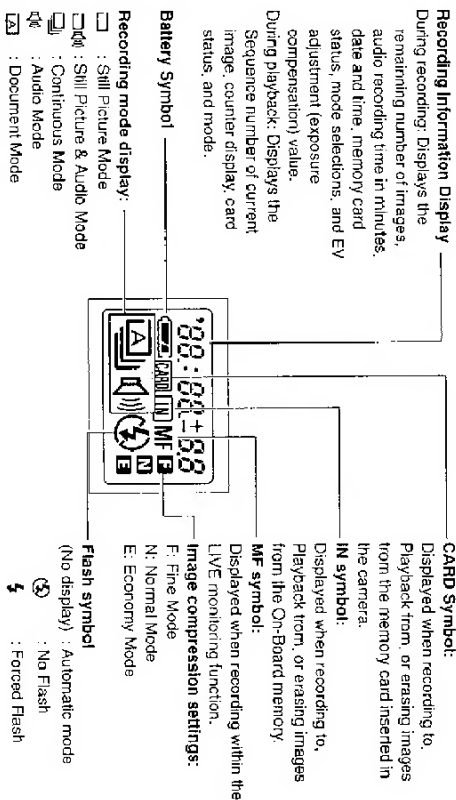- Wrist Strap Attachment (p. 10)
- Lens

While reading this manual, leave the inside and outside flaps open for easy reference to the camera's components.

1

Display Panel

Camera Status is shown on the DisplayPanel.

Recording Information Display
During recording: Displays the remaining number of images, audio recording time in minutes, date and time, memory card status, mode selections, and EV adjustment (exposure compensation) value.
During playback: Displays the Sequence number of current image, counter display, card status, and mode.

Battery Symbol

Recording mode display:
- ▢ : Still Picture Mode
- ▢◄) : Still Picture & Audio Mode
- ◄) : Continuous Mode
- ◄) : Audio Mode
- 🄰 : Document Mode

CARD Symbol:
Displayed when recording to, Playback from, or erasing images from the memory card inserted in the camera.

IN symbol:
Displayed when recording to, Playback from, or erasing images from the On-Board memory.

Image compression settings:
- F: Fine Mode
- N: Normal Mode
- E: Economy Mode

MF symbol:
Displayed when recording within the LIVE monitoring function.

Flash symbol
(No display) : Automatic mode
- ⊗ : No Flash
- ⚡ : Forced Flash

Notes:
- In this illustration, all available symbols are displayed concurrently. In practice, however, the display will vary depending on use and settings.
- If no buttons or levers are operated for approximately 5 minutes while the main switch is set to [REC], the Auto Power-Off function dims the display panel to save power (requiring that only a small amount of battery power be consumed). To turn the power back on, lightly press the shutter release button.
- See p. 61 for information on adjusting the Auto Power-Off setting.

■ Display Panel Messages

When the following is displayed, confirm the contents and respond accordingly.

Message	Condition	Description	Ref. page
no card	Light is on	Memory card is selected but no memory card is inserted.	p. 16
	Light is blinking	Memory card is not initialized.	p. 16
no fo	Light is blinking	Memory card was initialized in another device.	p. 16
		Data in the memory card is damaged. (Initialize the memory card)	
		Incompatible memory card is inserted.	p. 14
no rec	Light is blinking	Memory card is write-protected	—
no copy	Light is blinking	Insufficient free memory available on memory card to copy selected images from internal memory. Replace the memory card	p. 16
⊏■	Light is on	The batteries are getting low.	p. 11
⊏ ⊐	Light is on	The batteries are depleted.	p. 11

2

■Error Display and Description

When the following is displayed, confirm the contents and respond accordingly.

Error message	Description	Ref. page
Er. rEC	Failed to record. Playback may be impossible. Record the data again.	—
Er. Er oS	Failed to erase. After turning off the main switch, turn the power back on, then shoot a test shot. When the test shot is erased, the data that was not erased will be erased at the same time.	p.55
no Fo	Failed to initialize. Try again.	p.16
Er. PL AY	Failed to play back the data. Turn the power off and then on, and try again.	p.52
Er. CO PY	Failed to copy the data. Try again.	p.60

■ Displays for Recording, Playback, Deleting and Copying

The following messages will appear on the display panel during operation.

●Recording

Display	Function	Ref. page
S EL F	Self-Timer shots.	p.42

●Playback

Display	Function	Ref. page
Pr	Program Playback	—

Note: The optional DR-2 Remote Control Unit is required for program playback.

●Erasing

Display	Function	Ref. page
Fo	Initializing memory card.	p.16, 57
E ra SE	Erasing image.	p.55

●Copying

Display	Function	Ref. page
CO PY	Copying memory contents.	p.60

■ Display during data checking

When a memory card is inserted and the main switch is then set to [REC] or [PLAY(PC)], the camera begins to check the data on the memory card. Bars (-) are displayed on the display panel to indicate the progress of the data checking operation. Once six bars are displayed, data checking is complete.

Note: No bars will be displayed when using certain types of memory cards.

3

Table of Contents

Basic Operation

Preparing the camera
● **Preparing a power source**
① Insert batteries into the camera. See p. 11.

Note: When using the AC Adapter, connect the AC Adapter to the camera body first, then plug the adapter into an electrical outlet. See p. 13.

● Preparing a memory card
① Insert a memory card. See p. 16.
② If using a new memory card, first initialize the memory card. See p. 16.

Note: A memory card is not required if data is being recorded to the internal memory.

Recording
① Slide the main switch to [REC]. See p. 23.
② If a memory card is inserted, press the SELECT button to select the destination drive for recording. See p. 24.
③ Press the PIC button to select the picture quality. See p. 25.
④ Press the REC/ERASE button to select the REC MODE. See p. 26.
⑤ Compose the picture and select standard or wide-angle view. See p. 27.
⑥ Press the shutter release button halfway down to focus. See p. 30.
⑦ Press the shutter release button all the way to record. See p. 31. A short "beep" sounds to confirm recording.

Transferring data to a computer
Use of the connection cable is required. See p. 60.

Playback a image
① Connect the camera to a TV monitor. See p. 48.

Note: The camera can also be used with the Ricoh LCD Monitor. See p. 49.

② Slide the main switch to [PLAY(PC)]. See p. 52.
③ If a memory card is inserted, press the SELECT button to select the drive containing the image to be played. See p. 52.
④ Select the image to be played with the FWD and REV buttons. See p. 52
⑤ To playback an image - except one recorded in Still Picture Mode or Document Mode - press the shutter release button. See p. 53-54. An image is displayed on the monitor screen.

Safety Precautions

Please read all safety notes in this manual to use this product safely. Safety notes are designated as follows:

⚠ **Warning**   This symbol indicates mishandling that may result in a serious injury or even death.

⚠ **Caution**   This symbol indicates mishandling that may cause injury to the user as well as damage to objects.

To ensure safe operation of your new equipment, please observe the following precautions.

⚠ **WARNING**
● It is dangerous to use this device if any sign of malfunctioning is apparent, such as an unusual odor or smoke. In such cases, immediately unplug the power plug from the electrical outlet (if using an AC Adapter), as a fire or shock hazard may be present. Contact a Ricoh service representative. Do not continue to use a malfunctioning camera.

● When connecting the camera to a standard AC electrical outlet, use only Ricoh's optional AC-2 AC Adapters. Use of any other AC adapter may cause a fire, electric shock or product failure.

To ensure safe operation of your new equipment, please observe the following precautions.

⚠CAUTIONS

● Do not disassemble or attempt to repair the camera. The camera contains a high-voltage, high-current circuit capable of causing an electric shock.

● If the flash is damaged or exposed, do not touch the inside. The camera contains a high-voltage, high-current circuit capable of causing an electric shock. If the camera is damaged, bring it in to the dealer where you purchased it or to a Ricoh service representative.

● Never dispose of the batteries in a fire, short-circuit the terminals, attempt to disassemble, heat, or recharge the batteries (only nickel-cadmium [NiCad] batteries and nickel-metal-hydride [NiMH] batteries can be recharged). Doing so may damage the batteries and cause a fire, injury or environmental contamination.

● Do not solder the batteries. Doing so may damage the batteries and cause a fire, injury or environmental contamination.

● Liquid leaking from a battery can cause skin burns. If you touch a damaged battery, immediately wash your hands with water (do not use soap). If a battery leaks inside the camera, carefully remove the battery, thoroughly wipe off the leaked liquid, and insert a new battery.

Using optional accessories
When using optional accessories such as the Remote Control Unit or AC Adapter, be sure to read the safety precautions in the manuals provided with each accessory.

Chapter 1. Getting Started

Before Using the Camera

Confirming the package contents

Check the packaging to ensure you have received the following items. Read the warranty, then store it in a safe place.

Digital Camera (Camera Body) 1
AV Cable 1
Soft Case 1
AA Alkaline Batteries 4
Wrist Strap 1
Operation Manual (this document) 1
Warranty

Attaching the wrist strap

To attach the wrist strap, loop the leading end through the wrist strap lug of the camera, as indicated in the illustration.

● **For security, always use the wrist strap when carrying the camera.**

Note: Avoid swinging the camera as itis carried.
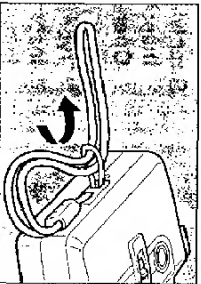
Supplying Power to the Camera

The camera can be powered either by common AA alkaline batteries or by standard AC household current.

Inserting batteries

Insert the AA alkaline batteries to begin using the camera.

Note: The camera can also be powered by commercially available rechargeable nickel-cadmium (NiCad) batteries or nickel-metal-hydride (NiMH) batteries.

⚠CAUTIONS

● **Never dispose of the batteries in a fire, short-circuit the terminals, attempt to disassemble, heat, or recharge the batteries (only nickel-cadmium [NiCad] batteries and nickel-metal-hydride [NiMH] batteries can be recharged). Doing so may damage the batteries and cause a fire, injury or environmental contamination.**

● **Do not solder the batteries. Doing so may damage the batteries and cause a fire, injury or environmental contamination.**

● **Liquid leaking from a battery can cause skin burns. If you touch a damaged battery, immediately wash your hands with water (do not use soap). If a battery leaks inside the camera, carefully remove the battery, thoroughly wipe off the leaked liquid, and insert a new battery.**

About rechargeable batteries
Before using commercially available NiCad or NiMH batteries, thoroughly read the safety precautions provided with each product.

Note:
• *Use only AA-type batteries.*
• *Never use manganese batteries, lithium batteries, or any other type of battery not specifically recommended. Use of such batteries may damage the camera or monitor.*
• *Some batteries may become hot after a long period of use.*
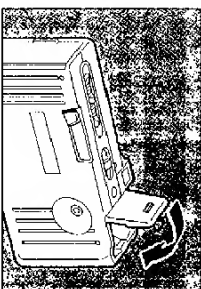
Getting Started **1**

❶ After confirming that the main switch of the camera is set to [POWER (OFF)], slide the lever to open the battery cover.

Note: See p. 23 "Turning on the power" for information on the camera's power sources.

❷ Insert the batteries. Carefully note the proper battery polarities (positive [+] poles and negative [-] poles).
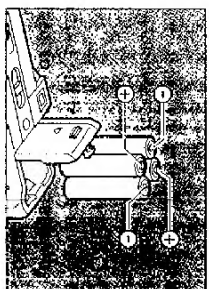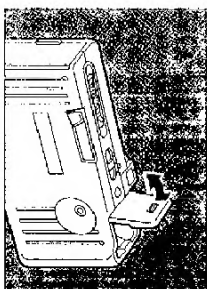
❸ Close the battery cover.

● **Recording and playback capacities**

The following table shows the number of recordable images and the playback time available with AA alkaline batteries (at temperatures between 10°C and 30°C).

Type of battery	Number of recordable standard images (Still pictures)	Standard playback time (Still pictures)
AA alkaline batteries	Approximately 300 images	Approximately 2 hours

Notes:
• The above capacities are based on Ricoh's measurement standards.
• Battery life varies with flash use and other variables.
• Results may vary by type and brand of battery.
• The standard playback time refers to playback on a TV monitor.
• Use of the optional LCD Monitor during recording and playback will reduce the above values.
• Whenever you do not have access to an electrical outlet, we suggest that you always carry a spare set of batteries.
• The battery symbol ( ) appears on the display panel to indicate that the batteries are weak or depleted. Prepare spare batteries. With rechargeable NiCad or NiMH batteries, the time between lighting of the battery symbol and complete depletion of the batteries is shorter than when alkaline batteries are used.

■ **Safety Notes**
• Be sure to maintain the correct polarity (positive [+] and negative [-] poles) when inserting the batteries.
• Do not use damaged batteries or batteries that are near the end of their service lives.
• Do not place batteries near a heat source or dispose of them in a fire.
• Do not subject the batteries to strong impact.
• Do not mix batteries of different types, brands, manufacturers, or ages.

Operating on AC power

If you intend to use your camera to record or play back over a long period of time, it is advisable to connect the camera to a household electrical outlet with the optional AC Adapter.

⚠ **CAUTIONS**
● When connecting the camera to a household electrical outlet, use only Ricoh's optional AC-2 AC Adapters. Use of any other AC adapter may cause a fire, electric shock or product failure.

About the AC Adapter
Be sure to read the safety precautions in the manual supplied with the AC Adapter.
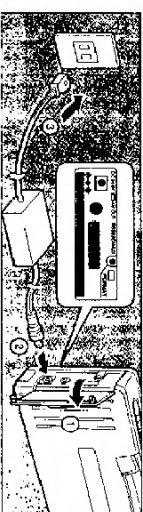
(The illustration shows how to connect the Ricoh AC-2 AC Adapter.)

❶ Confirm that the main switch of the camera is set to POWER (OFF), then open the side cover of the camera.

❷ Connect the connection cable of the AC Adapter to the power (DC IN 6V) terminal of the camera.

❸ Insert the plug into an electrical outlet.

Note: When the AC Adapter is used with the camera, it becomes the active power source, even when the battery is installed in the camera.

Important:
• Plug the power cord firmly into the power source and into the camera. If the power plug or connecting cable loosens during recording, data could be lost or damaged.
• When the AC Adapter is connected to the camera, the power supply to the camera is temporarily interrupted during the change of power source. If this occurs while the camera is in use (for example, during recording, playback or erasing), data can be damaged or destroyed. Therefore, always set the main switch of the camera to [POWER (OFF)] before connecting the AC Adapter.

Memory Cards

This section explains how to use a memory card. If you are not using a memory card, see p. 18 "Before you begin Recording."

Types of Memory Cards

When the memory card has been designated as the memory source, the data is recorded onto the memory card. ATA Memory Cards incorporating flash memory are optionally available. See p. 66, "Accessories for RDC-2."

Note: Camera performance specifications based upon Ricoh's ATA Flash Memory Card. Performance may vary using other manufacturers' cards.

One of the following card types is recommended:
- Flash memory cards conforming to ATA standard
- Type I or Type II cards conforming to PCMCIA 2.1, JEIDA 4.2 standard (Maximum Capacity 40 MB memory, memory write cycle: 300 ns max.)
- Flash memory cards conforming to AIMS standard (Maximum Capacity 40 MB)

Notes:
- *Some ATA cards may not be fully compatible with this camera. Ricoh ATA cards are recommended to ensure compatibility.*
- *Some commercially available ATA memory cards require longer recording times.*
- *This camera cannot use SRAM cards.*

■ Handling Precautions for Memory Cards

- Do not bend, drop, or subject the memory card to shock.
- Avoid using or storing the memory card in an environment conducive to static electricity or electromagnetic interference.
- Avoid using or storing the memory card to heat, moisture, or dusty or corrosive environments.
- Do not allow dirt or foreign objects to contact the connectors.
- Do not place the card near a heat source or dispose of them in a fire.
- Memory cards have a limited life expectancy. After prolonged use, the card may be unable to record data.

A note about recorded images...

- Recorded data can be lost it the memory card malfunctions or is repaired, or is mishandled or subjected to static electricity or electromagnetic interference. Please note that Ricoh cannot be responsible for any loss of or damage to recorded images if you experience malfunctions during recording or playback.
- Never remove the batteries, turn off the power, or connect the AC Adapter to the camera while recording data on the memory card. Doing so may damage or destroy data on the memory card.

Getting Started **1**

Inserting a memory card

Before inserting a memory card, make sure the main switch of the camera is set to [POWER (OFF)].

Note: Do not insert or remove a memory card while the camera power is turned on.

■ Inserting the memory card

1 Open the side cover of the camera.

Note: When inserting the memory card, be sure the card is not upside down, backward, or askew.

2 With the front surface of the card facing up, insert the memory card into the card slot. Push the card all the way into the slot until the trailing edge of the card is flush with the card slot opening.
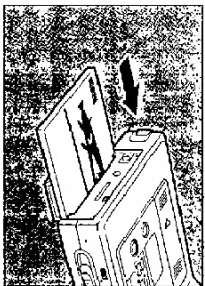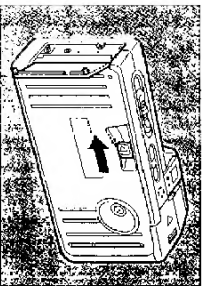
■ Removing the memory card

To remove the card, slide the card ejection lever in the direction of the arrow shown in the illustration.

Note:
• *Do not remove the card while recording data to the card. Doing so may damage or destroy the data on the card.*
• *Do not use the memory card ejection lever while the side cover is closed.*

Initializing the memory card

Before using a new memory card or a memory card that has been initialized in another device such as a personal computer, you must initialize (or "format") the card in the camera.

Note: Confirm that a memory card has been inserted. See p. 16 "Inserting a memory card."

**1 Slide the main switch of the camera to [PLAY(PC)].**
Confirm that the CARD symbol appears on the display panel. If the IN symbol appears on the display panel instead, press the Memory Select button for approximately one second to display the CARD symbol.

Note: For information on using the Memory Select button, see p. 24 "Designating the destination drive for recording."
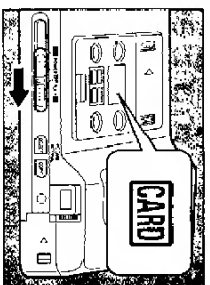
2 Open the side cover of the camera, and press the Format button with the tip of a ball-point pen or similar object.
Stop pressing when "Fo" appears on the display panel.

Note: Do not press the Format button with any object that has a sharpened point or is easily broken.
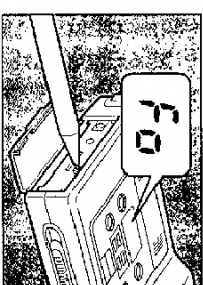
3 Press the shutter release button for at least two seconds to begin initialization.
When initialization is completed, a buzzer sounds, and the counter display on the display panel resets to 0. Initialization is now completed. Close the side cover and begin using the camera.
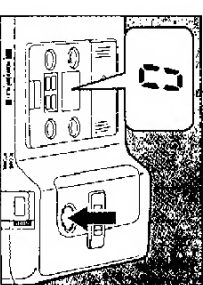
Important:
Initialization erases all data recorded on the memory card. Erased data cannot be recovered.

Notes:
• *Some types of memory cards require more than a minute for initialization.*
• *Initialization cannot take place if a Continuous Still Picture or Audio is currently in pause state.*

• **Keeping the memory card in good condition**
We suggest that you initialize the memory card in the following cases.
• After approximately 4,000 playback and erase cycles.
• When you wish to erase all data in the memory card.

Before You Begin Recording

This section explains initial camera adjustments and basic camera operations.

Adjusting the date and time

The camera records the date and time of every image recorded. You should set the correct date and time when you first begin using your camera, as well as when you travel to a different time zone.

Note:
- Input the date and time in the following format:yy/mm/dd
- The camera uses a 24-hour clock, where 0:00 indicates midnight and 12:00 indicates noon.

1 Slide the main switch of the camera to [REC].
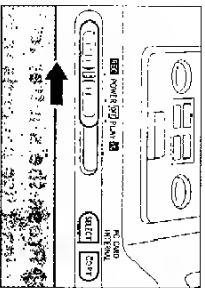
2 Press and hold the DATE button for more than two seconds.
On the display panel, the year designation begins flashing.

3 Press the FWD button or the REV button to set the correct year.

To advance the number
Press the FWD button. Press and hold the button to fast-forward the numbers.

To reverse the number
Press the REV button. Press and hold the button to reverse the numbers rapidly.

4 Set the other date and time numbers in the same manner.
Press the DATE button repeatedly to select (in order) the year, month, day, hour and minute. When the selected date or time designation is flashing, press the FWD button or the REV button to set the correct numbers.
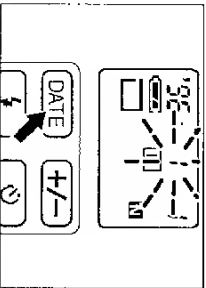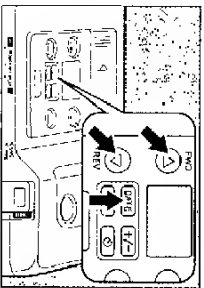
5 After setting the minutes, press the DATE button again to start the clock.

Note: To adjust the seconds, press the DATE button.

Confirming the date and time settings
Press the DATE button repeatedly to display the date, time, and normal displays on the display panel.

Note: Remember that the date & time setting mode appears when you press and hold the DATE button for two seconds or longer.
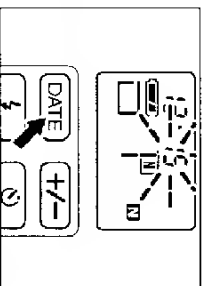
Adjusting the diopter

Adjust the diopter so that the subject can be clearly seen in the viewfinder.

1 Rotate the diopter adjusting dial up or down to adjust the viewfinder so that the subject can be seen clearly.
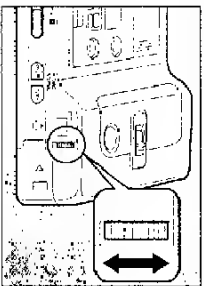
Holding the camera

Unintentional movement of the camera during shooting will result in blurred pictures. For best results, hold the camera steady when pressing the shutter release button.

1 We suggest you hold the camera securely with both hands as shown in the illustration. Hold your elbows lightly against your sides, steady the camera by gently pressing it against your face, and look through the viewfinder.
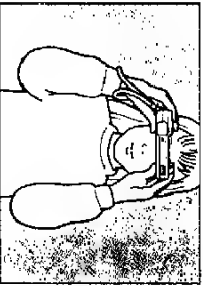
2 Place your index finger lightly on the shutter release button.

Notes:

- *If you hold your index finger too far from the shutter release before pressing, the camera may shake and a blurred picture may result.*
- *Holding the camera upright will result in the subject being displayed sideways.*
- *Be sure to keep your fingers, hair, and the wrist strap, etc., away from the camera lens and flash window.*
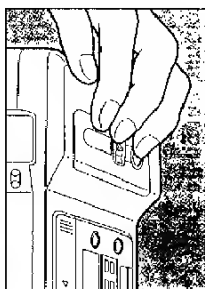
Chapter 2: Recording Basics

Basic Picture-Taking

This chapter explains basic operations and other information needed to record images.

Picture-taking sequence

How to take a picture in Still Picture Mode:

Turn on the power.
Slide the main switch of the camera to [REC]. See p. 23.

↓

Choose the destination drive for recording.
The camera normally records images to its internal memory. However, if a memory card is inserted, you can select either the memory card or the internal memory as the destination drive for recording the images. See p. 24.

↓

Select the image quality.
Select the desired image quality - either F, N, or E. See p. 25.

↓

Select the recording mode.
Select the desired recording mode from the five patterns available (⬜, ⬜�, ⬜⬛, ◧⬛)
(◨). See p. 26.

↓

Select the desired view.
Select either standard view or wide-angle view with the Bifocal Switching Lever.
See p. 27.

↓

Look through the viewfinder.
Look through the viewfinder to compose the image. See p. 28.

↓

Confirm the indicator lights.
Press the shutter release button halfway down to confirm the camera status (the Auto-focus and Flash indicators). See p. 29.
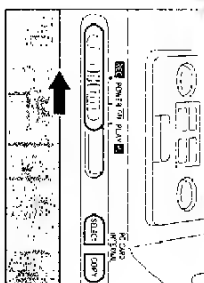
↓

Take the picture.
Press the shutter release button to record the image.

Turning on the power

Turn on the power with the main switch of the camera. If a memory card is installed, the CARD symbol appears on the display panel, indicating that the data on the memory card is being checked.

❶ Slide the main switch to [REC].
The lens cover opens.

Power is turned on and information is displayed on the display panel.

Notes:
- *When a memory card is inserted, the CARD symbol appears on the display panel.*
- *When the main switch is set to [POWER OFF], the power is turned off, and the lens cover closes.*
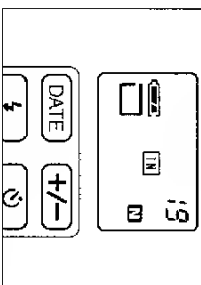
The Auto Power-Off function
If no buttons or levers are operated for approximately 5 minutes or longer while the main switch is set to [REC], the Auto Power-Off function dims the display panel to save power (requiring that a small amount of battery power be consumed in this state). To turn the power back on, lightly press the shutter release button.

Canceling and retaining mode settings
When the power to the camera is turned off, some mode selections are canceled (see table below). To continue shooting in the same mode, select the mode again.

Mode	Auto Power-Off	Main switch OFF
Drive designation	○	×
Recording mode	○	○
Resolution	○	○
Flash mode	○	×
EV adjustment	×	×
LIVE monitoring function	×	×

○: Selected mode is retained. ×: Selected mode is canceled.

If the camera will not be operated for a long period of time, switch the main switch to [POWER (OFF)].
You can override the Auto Power-Off setting. For details, see p. 61 "Auto Power-Off and Buzzer settings."

Designating the destination drive for recording

You can designate whether data is recorded in the internal memory of the camera or onto an inserted memory card.
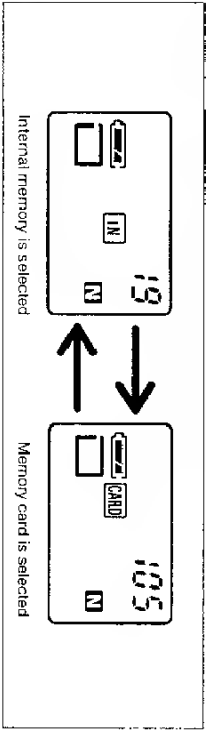
■ Destination drive symbols on the display panel

Press the SELECT button to select the destination drive.
Internal memory is selected/Memory card is selected.

Internal memory is selected → Memory card is selected

Note: Follow the same procedure to change the drive in any operation.

■ Designating the destination drive for recording

Press the SELECT button for approximately one second to change the selected destination drive for recording.

The symbol on the display panel indicates the selected destination drive for recording.

Note: To determine the number of images recordable in memory, see p. 78 "Memory Storage Capacity."
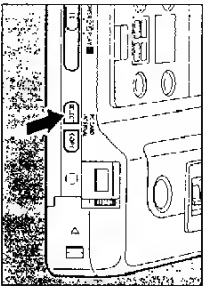
Selecting the image quality

This digital camera employs data compression and decompression schemes that allow a large amount of information to be recorded. N (Normal) mode is standard, F (Fine) mode gives priority to picture quality, and E (Economy) mode gives priority to the number of images recordable. You can select the desired image quality for each image recorded.

■ PIC Mode symbols on the display panel

Press the PIC Mode button to select the desired image mode.

NORMAL MODE → ECONOMY MODE → FINE MODE
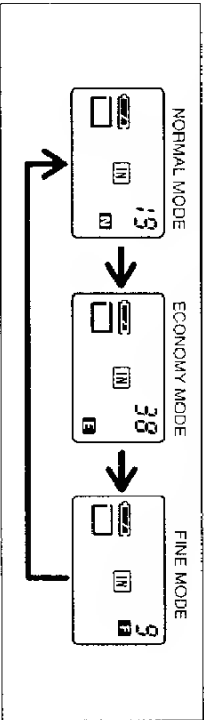
■ Selecting the image quality

❶ Press the PIC Mode button to select the image quality.

The selected symbol appears on the display panel.

● Standard capacities for image data

Image quality	Image size
F Mode	Approximately 192 kB/image
N Mode	Approximately 96 kB/image
E Mode	Approximately 48 kB/image
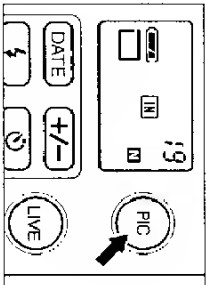
For information on the number of images recordable at the various image quality settings, see p. 78 "Memory Storage Capacity."

Selecting a Recording Mode

Five recording modes are available, including Still Picture Mode and Audio Mode. You can easily select the desired mode.

■ Recording mode symbols on the display panel

Press the REC MODE/ERASE button to select the desired mode.

Still Picture Mode
(See p. 26.)

Still Picture & Audio Mode
(See p. 36.)

Continuous Shooting Mode
(See p. 37.)

Document Mode (See p. 38.)   Audio Mode (See p. 38.)
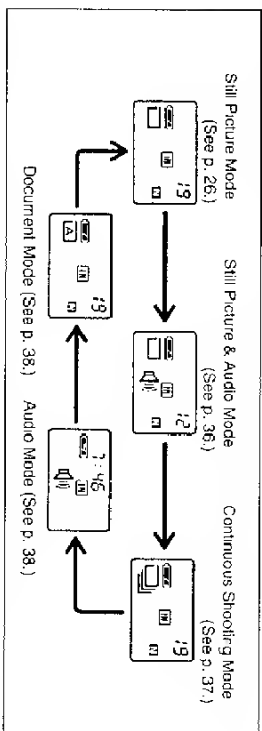
Note: The recording mode selected affects the number of images and/or time of sound that can be recorded.

■ Selecting Still Picture Mode

Press the REC MODE/ERASE button repeatedly until the [▢] symbol appears on the display panel.

REV   FWD

DATE

REC MODE
ERASE

LIVE   PIC
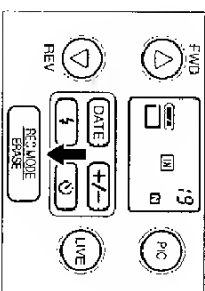
Selecting standard or wide-angle view

By moving the Bi-focal Switching Lever, you can switch between a standard or wide-angle view of the subject in the viewfinder. This allows you to change the view of the subject without changing the distance from the camera to the subject.

■ Selecting standard view

Slide the Bi-focal Switching Lever to the [▲] side. The subject appears closer.
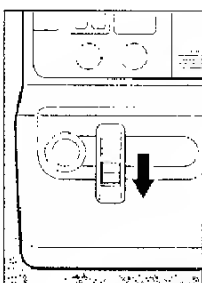
■ Selecting wide-angle view

Slide the Bi-focal Switching Lever to the [♦] side.

The subject appears farther away.

Recording Basics **2**
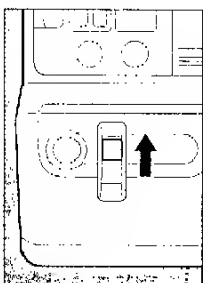
Looking through the viewfinder

Compose the image while looking through the viewfinder.

Note: *When shooting at distances of 0.25 m or less, or when exact image composition is desired, take a test picture beforehand to confirm the image captured by the camera.*

① **Shooting frame**
Enclose the subject within this frame.
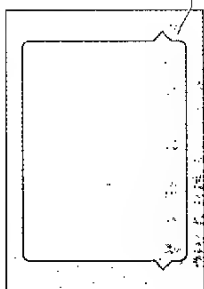
② **Short-distance compensation frame (Standard view)**
When the distance to the subject is approximately 0.25 m and the lens is set to Standard view, enclose the subject within this frame.
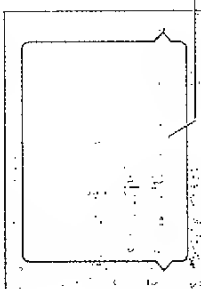
③ **Auto-focus range**
The center portion of the viewfinder is the area on which the camera focuses.

Approximately one-half the height, positioned at the center.

Approximately one-half the width, positioned at the center.
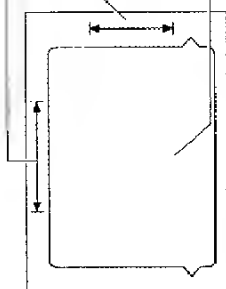
Note: *The colors in the illustration of the viewfinder are for clarity only. The actual viewfinder is not colored.*

Lens	Distance to subject	Shooting range
Standard ([▲] side)	0.25 m (0.82 ft.)	②
	0.25 ~ 3.0 m (0.82 ft. – 10 ft.)	② ~ ①
	3.0 m (10 ft.) ~ ∞	①
Wide-angle ([◆] side)	0.25 (0.82 ft.) ~ ∞	①

Indicator lights

When the shutter release button is pressed halfway down, the Auto-focus and Flash indicator lights (below the viewfinder) light or flash to indicate the status of these functions.

Auto-focus light (green)

Flash light (red)
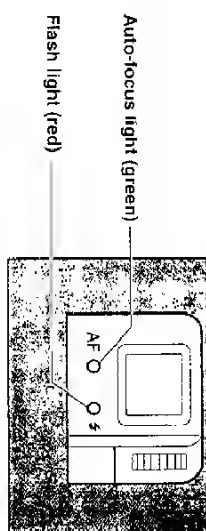
● **Auto-focus indicator light (green)**

Status	Description	Shutter release button	Ref. page
Lit	In focus	Can be pressed.	p.31
Rapid flashing	Focusing not assured.	Can be pressed.	p.32
Slow flashing	Take picture after confirming range on monitor.*	Can be pressed.	p.32

* When the distance to the subject is approximately 25 cm or less, the field of view in the viewfinder can be quite different from that of the camera lens. For best results, use the LIVE monitoring function or the Macro shooting function.

See "LIVE Monitoring Function" on p. 44, and "Macro Shooting" on p. 46.

● **Flash indicator light (red)**

Status	Description	Shutter release button	Ref. page
Lit	Flashing	Can be pressed.	p.31
Rapid flashing	EV adjustment is inappropriate.**	Can be pressed.	p.33, 40
Slow flashing	Flash is recharging.	Can not be pressed.	p.31

** The exposure may be insufficient when shooting in No-Flash Mode or with Document Mode selected as the recording mode. When the distance to the subject is approximately 25 cm or less, the flash may result in overexposure.

Shooting in Still Picture Mode

This section explains the basics of shooting in Still Picture Mode. Please refer to p. 19 "Holding the camera," for hints on how to hold the camera still while shooting.

① Look through the viewfinder to compose the image.

Note: When shooting a subject at a distance of approximately 1 to 25 cm, use the LIVE monitoring function or Macro function for best results.

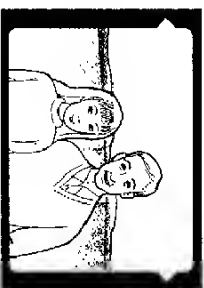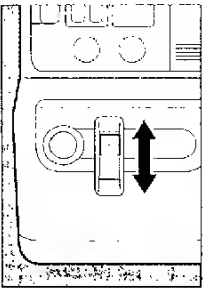See "LIVE Monitoring Function" on p. 44, and "Macro Shooting" on p. 46.

② Select the desired view of the subject with the Bi-focal Switching Lever.

Note: To select the view of the subject, see p. 27 "Selecting Standard or Wide-Angle View." For information on the viewfinder, see p. 28 "Looking through the Viewfinder."

③ With your index finger, press the shutter release button halfway down.

The shutter release button has two steps. Press and hold the shutter release button halfway down to activate the auto-focus mechanism, which automatically brings the subject into focus. To record the image, continue pressing the shutter release button all the way down.
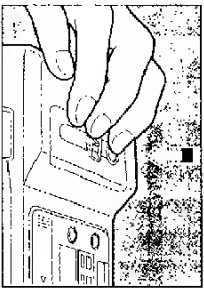
Note: When the subject is in the center of the viewfinder, it is in the auto-focus range and is brought into focus. If the subject is not at the center of the auto-focus range, use the focus-lock function. See "Focus-lock" on p. 43.

When the subject is in focus, the green Auto-focus indicator lights.

Notes:
- *While the Flash is recharging, there may be a delay before the Auto-focus mechanism begins functioning.*
- *Pressing the shutter release button all the way down before allowing the auto-focus mechanism to function may result in an out-of-focus image. Be sure to confirm that the Auto-focus indicator lights before taking the picture.*

See p. 29, "Indicator lights," for information on the Auto-focus light.

④ Keep your finger on the shutter release button, then smoothly press the button all the way down.

A short "beep" sounds to confirm that the subject image has been recorded. The number on the display panel indicating the remaining number of recordable images is reduced by one.

Notes:
- *When the camera is connected to an optional Ricoh LCD Monitor or to a TV monitor, the captured image is displayed for approximately three seconds, allowing the focus of the captured image to be easily confirmed.*
- *The buzzer audio can be turned off. See p. 62 "Turning the Buzzer On or Off."*

When shooting in a dark area or in similarly difficult conditions, the red Flash indicator lights when the shutter release button is pressed halfway down.

Note: When the Flash is recharging, the Flash light flashes and the shutter release button cannot be pressed.
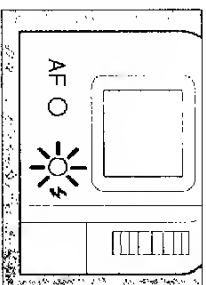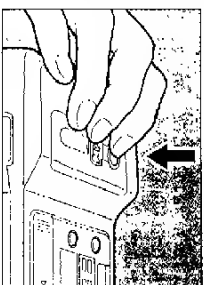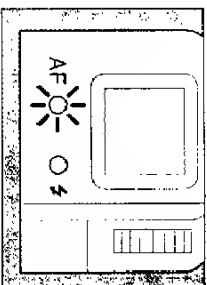
Accurate auto-focusing is sometimes impossible when the camera is too close to the subject or when the subject causes focusing problems. In this case, the green Auto-focus light flashes, but the shutter release button can be pressed. In such a case, follow one of the procedures below to ensure correct focus.

① Move away from the subject slightly to take the picture.
② Put the subject in focus with the LIVE monitoring function.
③ Focus on a different subject located at the same distance as that of the desired subject.
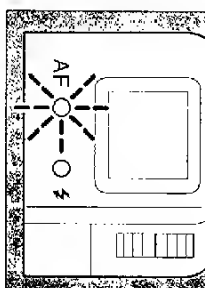
For information on the LIVE monitoring function, see p. 44, "LIVE Monitoring Function."
For more information on focusing, see p. 43 "Focus-lock."

■ Subjects that cause focusing problems

The following subjects tend to be difficult to focus:
• Subjects with no contrast (sky, white walls, car hoods, etc.)
• Straight horizontal lines
• Fast-moving subjects
• Subjects under low lighting conditions
• Subjects with strong backlighting or under reflected light
• Flickering subjects, such as fluorescent tubes

In such cases, focus on a different subject located at the same distance as that of the desired subject.

For more information on focusing, see p. 43 "Focus-lock."

■ Auto-white balance

To shoot a subject with natural hues, the "white balance" (compensation for the whiteness of a subject under varied lighting conditions) is automatically adjusted with the light-colored portion used as reference. For this reason, the white balance sometimes cannot be adjusted when the subject has a small light-colored area. In such a case, include a light-colored subject when composing the picture.

Subjects that complicate white balance:
• Monotone subject
• Subject with many light sources
• A deep background when shooting with the flash

Exposure compensation (EV adjustment)

When there is a significant difference in brightness between the background and the subject, the subject may be underexposed (too dark) or overexposed (too light). In such cases, compensate the exposure with the EV adjustment. This function allows you to intentionally underexpose or overexpose an image.

● **EV adjustment range**
±1.5 EV (in 0.3-EV steps)

● **Shooting with backlighting**
When the background is bright, the subject is underexposed. In such a case, adjust the exposure by increasing the value (positive (+) compensation).
Note: In backlit conditions, place the subject at the center of the shooting range.
If the subject is not placed at the center of the shooting range, the camera cannot determine the backlit conditions. In this case, make an EV adjustment.

● **Shooting too light images**
When shooting a too light image, the entire image is underexposed. The image of the subject is recorded as too dark and light-colored subjects are recorded as grayish. In such cases, increase the value to the positive (+) side to compensate the exposure.

● **Shooting too dark images**
When shooting a too dark image, the entire image is overexposed. The image of the subject is recorded as too light and light-colored subjects are recorded as grayish. In such a case, increase the value to the negative (-) side to compensate the exposure.
Follow the same procedure as when shooting a spot-lighted person image.

■ EV adjustments

❶ **Press the +/- button to display the compensation value on the display panel.**

❷ **Press the FWD or REV button to set the compensation value to be set.**

After adjusting the value, take the picture.

Adjusting the exposure by 0.3 EV
Press the FWD button.

Reversing the adjustment value by 0.3 EV
Press the REV button.

To cancel the setting, press the +/- button again.
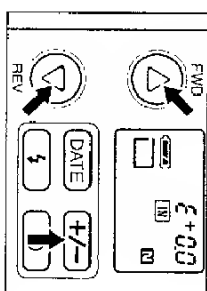
About the EV adjustment
① *To confirm the effect of the EV adjustment on the recorded image, watch the image that appears on the screen for approximately three seconds after the picture is taken, or play back the screen.*
② *The EV adjustment value (if any) is displayed on the screen when the LIVE monitoring function is used. In addition, the image on the screen shows the effect of the adjustment (i.e., the screen brightness changes).*
③ *The EV adjustment value can be set to within +1.5 EV. The adjustment displayed with the LIVE monitoring function is limited to the range of +1.5 EV to -0.6 EV. Confirm adjustments outside this range (-0.9 EV to -1.5 EV) with the method outlined in (1) above.*
④ *The EV adjustment value is retained in memory even when the EV adjustment setting is released. However, the EV adjustment setting affects only the images recorded when EV adjustment mode is selected.*

Chapter 3. Advanced Techniques

Recording Modes

This section explains the various recording modes and how to select the desired mode.

Selecting a Recording Mode

Press the REC MODE/ERASE button to select a desired recording mode.

REC MODE/ERASE button:
Selects the recording mode (Still Picture Mode, Audio mode, etc.).

Still Picture Mode
(regular mode). See p. 26.

Still Picture &
Audio Mode. See p. 36.

Continuous Mode.
See p. 37.

Document Mode.
See p. 38.

Audio Mode. See p. 38.

Note: The recording mode selected affects the number of images that can be recorded and the operating time.

Still Picture & Audio Mode

This mode allows you to record audio - for approximately 10 seconds - after shooting a still picture. This feature is convenient if you would like to add sound to enhance your digital images.

Note: The built-in microphone is located in the rear of the camera. If necessary,direct the microphone toward the audio source.

● Press the REC MODE/ERASE button until [📷📢] appears on the display panel.
Press the shutter release button to shoot a still picture. The Audio mode symbol ([📢]) starts flashing on the display panel to show that the 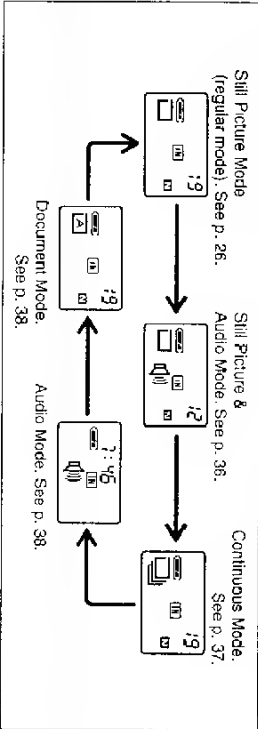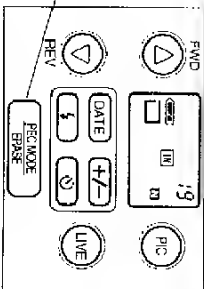camera has begun audio recording. You can record audio until the Audio mode symbol stops flashing (approximately 10 seconds).
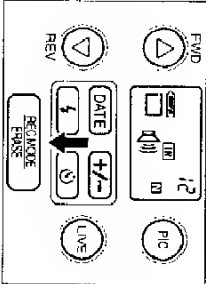
Canceling the selected mode
Press the REC MODE/ERASE button again to select another mode.

Continuous Mode

This mode enables you to shoot a sequence of still pictures by holding down the shutter release button. The focus is locked at the moment you press the shutter release button. The camera records the pictures sequentially at a rate of approximately one frame per second. This feature allows you to capture images as if a motor drive was attached to your camera.

● Press the REC MODE/ERASE button until [📷] appears on the display panel.
The camera will continue to shoot at a rate of approximately one frame per second as long as the shutter release button is held down. When you remove your finger from the shutter release button, the camera stops shooting.
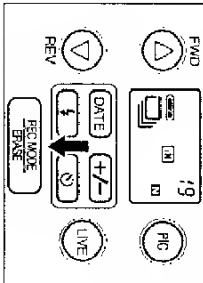
Notes:

- *In Continuous Mode, the focus and the exposure are locked at the moment you press the shutter release button.*
- *You cannot select a Flash mode for Continuous Mode.*
- *When several pictures are captured in Continuous Mode while the camera is connected to an LCD Monitor, only the first image is displayed on the monitor in order to minimize power consumption from the battery.*
- *The shooting speed varies according to the image quality selected and type of memory card used (if any).*

Memory Drive selected	Image quality		
	F Mode	N Mode	E Mode
Internal Memory	Approx. 1.5 sec./frame	Approx. 1.3 sec./frame	Approx. 0.9 sec./frame
Ricoh Memory Card (ATA Type)	Approx. 1.5 sec./frame	Approx. 1.4 sec./frame	Approx. 1.2 sec./frame

- Values may vary by as much as 0.2 seconds, depending on shooting conditions, such as subject brightness.
  (Values measured by Ricoh.)

Canceling the selected mode
Press the REC MODE/ERASE button again to select another mode.

Audio Mode

This feature allows you to record any sound you desire. The recording time is determined according to the available memory on the designated memory drive and is displayed on the display panel.

Note: The built-in microphone is located in the rear of the camera. If necessary, direct the microphone toward the sound source.

❶ Press the REC MODE/ERASE button until [🔊] appears on the display panel.
The remaining audio recording time appears on the display panel. Press the shutter release button to begin audio recording. The elapsed time is displayed.
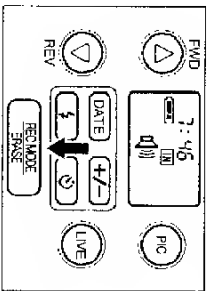
Interrupting audio recording
Press the shutter release button again to stop recording.

Canceling the selected mode
Press the REC MODE/ERASE button again to select another mode.

Document Mode

This feature is convenient when you want to record a document image. The image is specially processed to enhance the clarity of the document. (Specifically, black portions of the image are darkened and surrounding light portions are lightened to increase contrast.)

❶ Press the REC MODE/ERASE button until [▣] appears on the display panel.
Press the shutter release button to begin recording.
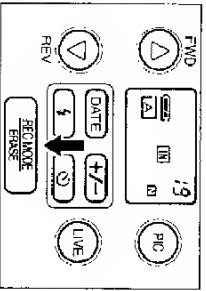
Notes: The built-in flash is disabled when Document Mode is selected.

Canceling the selected mode
Press the REC MODE/ERASE button again to select another mode.

Flash Mode

This section explains how to change the flash mode. You can select the flash mode best suited to the lighting conditions.

Selecting a Flash Mode

Press the Flash mode button to select the desired mode.
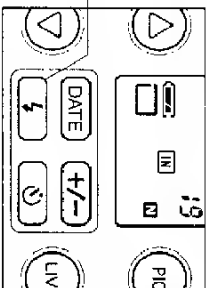
Flash mode button:
Selects a flash mode. (Three flash modes are available for various lighting conditions.)

Auto-Flash Mode (regular flash mode). See p. 31.

No-Flash Mode. See p. 40.

Forced Flash Mode. See p. 40.
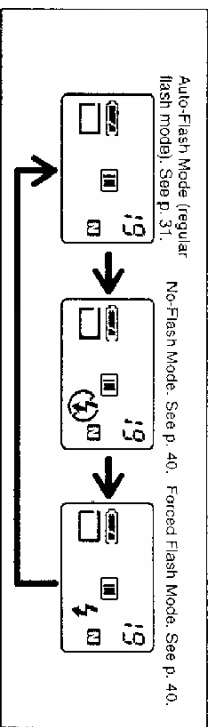
Notes: A flash mode cannot be selected for Continuous Mode, Audio mode or Document Mode.

Advanced Techniques 3

No-Flash Mode

In Still Picture Mode (the default, or standard, shooting mode), the built-in flash will always discharge when shooting in dark conditions. No-Flash mode, however, prevents automatic firing of the flash even in dark conditions. This feature is convenient when you wish to take a picture where flash photography is prohibited. It is also convenient for available-light photography.

● Press the Flash mode button until [⊛] appears on the display panel.

When you press the shutter release button, the camera will shoot a picture without using the flash.

Canceling the selected flash mode
Press the Flash mode button again to select another mode.
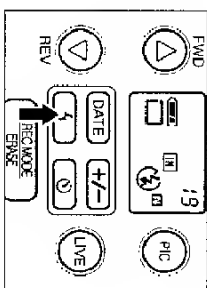
Notes:
* *In dim light, the camera's shutter speed is automatically reduced. To prevent a blurred picture, hold the camera very steady or stabilize it with a tripod. For best results, the subject should not move.*
* *If insufficient light is available and underexposure is likely, the red flash-ready light under the viewfinder will flash slowly. See p. 29, "Indicator lights."*

Forced Flash Mode

When taking photographs of people under strong light or with backlighting, dark shadows may appear on the faces in the image. By discharging the flash under any lighting conditions, Forced Flash mode softens the shadows.

● Press the Flash mode button until [↯] appears on the display panel.

Press the shutter release button to shoot a picture with the flash.
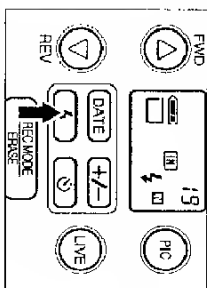
Note: In dim light, the camera's shutter speed is automatically reduced. To prevent a blurred picture, hold the camera very steady or stabilize it with a tripod. For best results, the subject should not move.

Canceling the selected mode
Press the Flash mode button again to select another mode.

Flash shooting range
When taking flash photographs in sunlight ("daytime synchro photography"), the recommended flash shooting range is approximately 1 meter (39 in.). If the flashlight does not reach the subject, a dark, underexposed image may result. If the lens-to-subject distance is less than 25 cm (10 in.), the reflected image may look washed-out.

Special Functions

This camera has a variety of special features that expand the use and enjoyment of your digital camera. Accessing these functions is easy, as described below.

Using the Self Timer

This function is convenient for taking a group shot that includes the photographer. Before using the Self Timer, compose the image with the camera on a steady support or a tripod.

❶ Press the Self Timer mode button. [SELF TIMER] appears on the display panel.
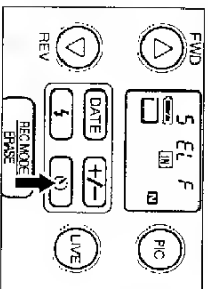
❷ Compose your picture and make sure that the camera is firmly placed. Press the shutter release button.

The Self Timer light on the front of the camera lights and the Self Timer begins to count down. After approximately 10 seconds, the shutter is released; the Self Timer light will flash for nearly two seconds before the shutter is released, and a beeper will sound. Self Timer mode automatically ends once the shutter is released.
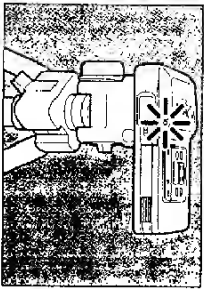
Notes:
- *Self Timer mode cannot be activated when the flash is recharging. Wait until recharging is completed before pressing the shutter release button.*
- *Self Timer mode is disabled in Continuous Mode and Audio mode.*

Focus Lock

This camera automatically focuses on subjects located within the Auto-focus frame in the Viewfinder. If the subject you wish to focus on is not within the Auto-focus frame, it may appear out-of-focus in the image. In such cases, use the Focus Lock feature.

For information on the viewfinder, see p. 28, "Looking through the viewfinder."

■ Use this feature to avoid the following problems:

When the subject you wish to focus on is not within the Auto-focus frame, the background will be in focus but the main subject will be out-of-focus.
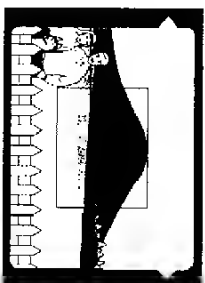
When the Auto-focus frame is occupied by subjects that you do not want to focus on, only those subjects will be in focus, not your principal subject.

■ Using the Focus Lock

❶ Slide the Bi-focal Switching Lever to select the desired view of the subject.

Note: Before using the Focus Lock, connect the camera to an optional Ricoh LCD Monitor or a TV monitor. Confirm the proper focus through the monitor.

Advanced Techniques 3

42

43

2 Compose the image, keeping the subject you wish to focus on within the Auto-focus frame.

3 Press the shutter release button halfway down until the green Auto-focus light illuminates, and hold your finger on that position. Focusing is locked at this stage.
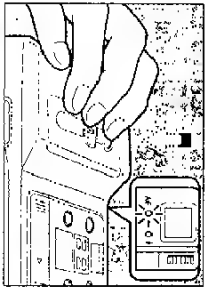
4 Recompose the image by moving the camera again, without removing your finger from the shutter release button. Then press the shutter release button all the way down to take the picture.

LIVE Monitoring Function

This function enables you to view the live image transmitted by the camera to a monitor, and to ensure correct focus manually. Connect the camera to an optional LCD Monitor or TV monitor (NTSC ONLY) before activating this function.

Notes: After activating this function, you cannot change the image quality, recording mode, memory drive designation, date/time indicator or the flash mode. Complete all necessary steps in advance.

1 Confirm the camera is properly connected to the LCD Monitor or a TV monitor (NTSC ONLY).

For information on connecting an LCD Monitor, see p. 49, "Connecting an LCD Monitor." For information on connecting a TV monitor, see p. 48, "Connecting a TV Monitor."

2 Slide the main switch on the camera to [REC].

3 Turn on the power to the connected LCD Monitor or TV monitor (NTSC ONLY).

4 Press the LIVE button on the camera.
The monitor begins displaying the live images captured by the camera, allowing you to confirm the image before recording.
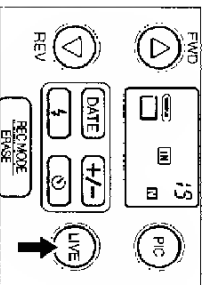
5 Press the FWD button or the REV button to focus accurately.
"MF" appears on the display panel.

6 Press the shutter release button to record the image.
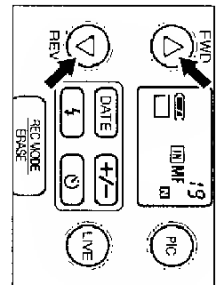
Cancelling LIVE mode
Press the LIVE button again to cancel.

Notes:
• *When the exposure compensation (EV adjustment) function is used while the LIVE function is activated, the EV adjustment value is displayed on the monitor. In addition, the image on the monitor shows the effect of the adjustment (i.e., the screen brightness changes).*
• *The EV adjustment value can be set to +1.5 EV to -1.5 EV. However screen reflects brightness change only for the compensation range of +1.5 EV to -0.6 EV.*
• *For information on exposure compensation, see p. 33, "EV adjustments."*

Extended monitoring
If no buttons or levers are operated for approximately 5 minutes during LIVE monitoring mode, the Auto Power-Off function cancels the mode to save power. If you anticipate monitoring for a long period of time, turn off the Auto Power-Off function. We also recommend that you keep fresh batteries available, as the LIVE function exhausts the batteries rather quickly. If power can be supplied from a nearby AC power line, however, we suggest that you power the camera with an optional Ricoh AC Adapter.

For information on the Auto Power-Off function, see p. xx, "Adjusting the Auto Power-Off Function."

Remote control
The optional DR-2 Remote Control Unit may be useful when the camera is positioned at a distance or is fixed in one place.

Advanced Techniques **3**

Macro Shooting (Close-up shooting)

Macro shooting is light close-up photography.

Note: In macro shooting, the image in the viewfinder can be quite different from the image captured through the lens. Connect the camera to an optional LCD Monitor or a TV monitor, and check the composition of the image through the connected monitor.

❶ With the Bi-focal Switching Lever, choose the desired view.
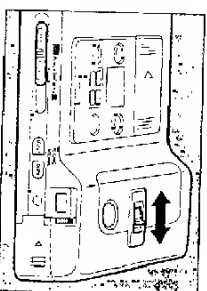
❷ Approach the subject and compose the picture. Then press the shutter release button to take the picture.

Note: When the camera is repositioned, the subject may go out of focus due to the depth of field (range of accurate focus) for macro shooting being quite narrow. Position the camera on a stable surface or tripod before taking a tight close-up. For best results, use the LIVE monitoring function.
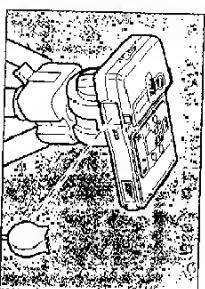
Minimum Shooting Distances
(Values may vary depending on lens position.)

Lens View	Minimum Shooting Distance
Standard ([▲])	Approx. 3 cm (1.2 in.)
Wide-Angle ([♦])	Approx. 1 cm (0.4 in.)

Shutter release button.
The optional Remote Control Unit is very useful for releasing the shutter when the camera is stabilized on a tripod or on any other support.

Chapter 4. Image Playback/Erasing

Before Playback a Image

This section explains playback operations and the information displayed on the screen during image playback.

Connecting a TV Monitor (NTSC ONLY)

To view recorded images on a TV monitor, use the AV cable provided to connect the camera to a TV monitor.

Note: Refer to the manual provided with the TV monitor for more information.
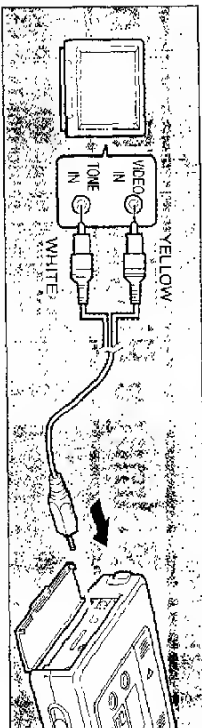
❶ **Make sure that the power to the camera and the TV monitor is turned off.**

❷ **Open the side cover of the camera, and connect the AV cable to the camera's AV output jack.**

❸ **Connect the opposite end of the AV cable to the Video/Audio input jacks on the TV monitor.**

If the Audio input jack of your TV monitor is stereo-ready, connect the audio plug of the AV cable to the white jack (for monophonic sound).

Notes:
- *When the TV monitor is connected to the camera with the AV cable, it can function as the monitor when taking pictures with the camera.*
- *To copy the data from the camera onto videotape, connect a VCR to the camera with the AV cable.*
- *To make full-color prints from the recorded data, connect a video printer to the camera with the AV cable.*

Extended playback

For extended playback, we suggest you use the optional Ricoh AC-2 AC Adapter, which takes power from a standard electrical outlet. See p. 13, "Operating on AC Power".

- *Be sure to turn off power to the camera before connecting the AC Adapter.*

Connecting an LCD Monitor

When the camera is connected to an optional LCD Monitor, you can immediately view the recorded image.

Note: Refer to the manual provided with the LCD monitor for more information.

■ Connecting an LCD Monitor

❶ **Turn off the power of the camera and of the LCD Monitor.**

❷ **Slide the mounting slot cover on the camera as indicated by the arrow to remove it.**
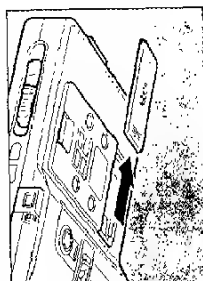
❸ **Remove the protective cover from the bottom of the LCD Monitor. As shown in the illustration,**

① hold the LCD Monitor vertically and set it straight down into the mounting slot in the camera;

② slide the LCD Monitor until it is firmly locked into position.
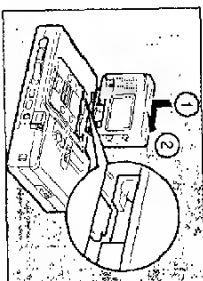
Notes:
- *To prevent loss, store the camera's mounting slot cover and the protective cover of the LCD Monitor in the soft case provided.*
- *To view an image simultaneously on both a TV monitor and LCD Monitor, connect a TV monitor to the camera with the AV cable.*

■ Disconnecting the LCD Monitor

❶ **Turn off the power of the camera and of the LCD Monitor.**

Image Playback/Erasing
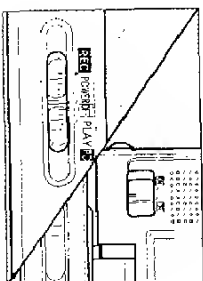
❷ **While pushing in the UNLOCK button, ①slide the LCD Monitor in the direction of the arrow; ② remove the LCD Monitor from the camera.**

Notes: Replace the camera's mounting slot cover and the protective cover of the LCD Monitor to prevent damage to the electrical contacts.
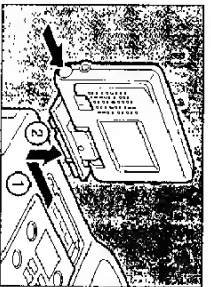
Extended use
For extended playback, we suggest you use the optional Ricoh AC-2 AC Adapter, which takes power from a standard electrical outlet. See p. 13, "Operating on AC Power."
• Be sure to turn off power of the camera before connecting the AC Adapter.

Information displayed during playback

During playback of a image useful information about the recorded images, including image numbers and recording mode, is displayed on the monitor for approximately 3 seconds, as shown below.

```
17 / 1 9        ▭◁»
REPLAY →PUSH·RELEASE
0 . 0 0
96/10/30
```

Number of this image
Total number of images
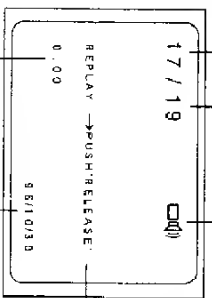
Recording Mode
□Still Picture: A image recorded in Still Picture Mode or Document Mode
◁» Audio: A image recorded in Audio mode
□◁»/Still Picture & Audio : A Image recorded in Still Picture & Audio mode
□Continuous image: A Image recorded in Continuous Mode

Prompt
Operation prompts are displayed here. For example, in the screen illustration displayed, the prompt suggests pressing the shutter release button to start Playback this image.

Time counter
Recording date
During playback of an audio , the elapsed time is displayed here.

Notes:
• *No prompts are displayed during playback of Still Picture s.*
• *In you have taken the picture while holding the camera in landscape orientation (horizontally), the reproduced image will appear on the monitor as intended. However, if you held the camera in portrait orientation (vertically) while shooting, the image will appear as if rotated 90 degrees.*

Information display
The monitor displays information about the recorded images, including the date and time of the recording. Press the DATE button repeatedly to change the display in the following sequence:

Standard display of Image Information (3 seconds only)

23/23

→

Fixed display of image information (remains on screen)

23/23

↓

Date/Time

↓

No display

↑

Time

↑

Date
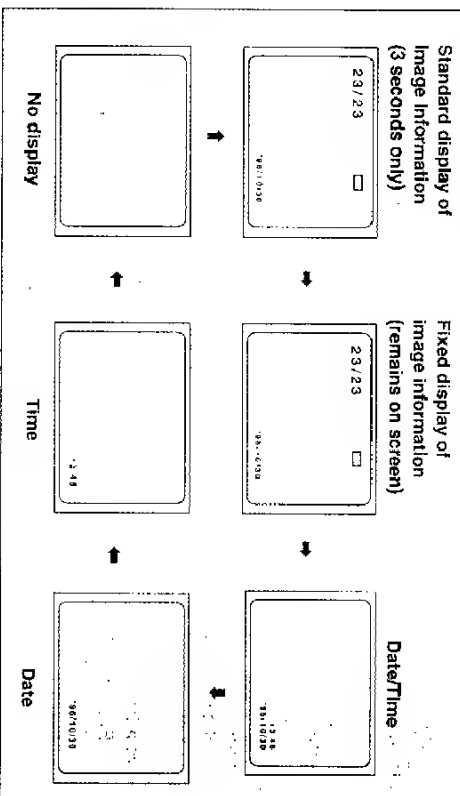
Image Playback

This section explains how to play back images recorded in the various recording modes. Basic operations are presented, beginning with the steps required to play back a Still Picture.

The playback sequence

The following is a brief explanation of the procedures for Playback a image:

Turn the power on
Slide the main switch of the camera to [PLAY (PC)].

Designate a memory drive
If a memory card is installed in the camera, you can designate either the memory card or the built-in memory as the image source.

Select a image
Press the FWD button or REV button to select the image to be replayed.
For Still Picture s, see p. 52.
For Still Picture & Audio, see p. 53.
For Continuous Still Picture, see p. 53.
For Audio s, see p. 54.

Playback Still Pictures

By pressing the FWD button or the REV button of the camera, you can select playback for any image recorded in Still Picture Mode or Document Mode (a Still Picture).

① Slide the main switch to [PLAY (PC)].
The monitor displays the data most recently recorded.

For more information, see p. 50 "Information displayed during playback."

② Press the SELECT button for approximately one second to designate an output memory drive.

③ Press the FWD button or the REV button to select the image to be played back.

To select a later image:
Press the FWD button.

To select an earlier image:
Press the REV button.
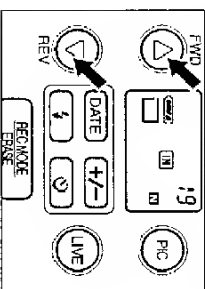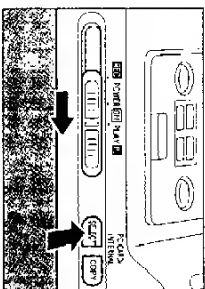
Notes: When Playback a image recorded in a mode other than Still Picture Mode or Document Mode, follow the prompts on the screen.

Playback Still Picture & Audio

You can play back data recorded in Still Picture & Audio mode through the following procedures.

① Press the shutter release button when the monitor displays the desired Still Picture & Audio .
The monitor starts Playback the recorded audio. After playback ends, the monitor display returns to the state prior to the playback.

Notes:
* If the FWD button is pressed during playback, the monitor skips to the next image.
* If the REV button is pressed during playback, the sound playback is cancelled and the monitor displays the image displayed before playback began. If the REV button is pressed again, the monitor skips back to the previous image.

```
17 / 19            ⏻
R E P L A Y  →P U S H . R E L E A S E .
9 6 / 1 0 / 3 0
```
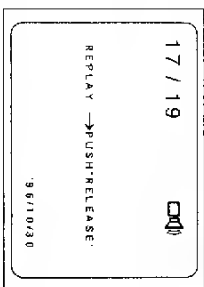
Playback Continuous Still Pictures

The following section explains how to play back images recorded in Continuous Mode.

① Press the shutter release button when the monitor displays a desired continuous still picture.
The recorded images are displayed frame by frame in succession. After the last picture in the image is displayed, the monitor displays the image displayed before continuous playback began.

Notes:
* If the FWD button is pressed during playback, the monitor skips to the next image.
* If the REV button is pressed during playback, the monitor displays the image displayed before playback began. If the REV button is pressed again, the monitor skips back to the previous image.

```
16 / 19            ⏻
R E P L A Y  →P U S H . R E L E A S E
9 6 / 1 0 / 3 0
```

Advancing the frame
Press the shutter release button during playback to interrupt the playback. Then press the FWD button, and the next frame will be displayed.

Reversing the frame
Press the shutter release button during playback to interrupt the playback. Then press the REV button, and the previous frame will be displayed.

Restarting playback
Press the shutter release button again.

Playback Audio

The following section explains how to play back images recorded in Audio mode.

● **Press the shutter release button when the number of the desired audio is displayed on the monitor.**

The monitor begins playback the recorded audio. After playback is over, the monitor displays the image number displayed before playback began.
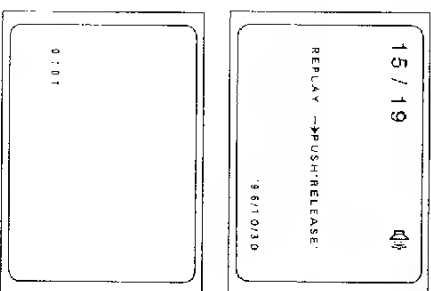
Notes:
• If the FWD button is pressed during playback, the monitor displays the next image number.
• If the REV button is pressed during playback, the monitor displays the image number displayed before playback began. When the REV button is pressed again, the monitor skips back to the previous image.

Advancing the counter readout
Press the shutter release button during playback to interrupt the playback. Then press the FWD button. The counter readout will advance as long as the FWD button is held down. (No sound is played during this step.) Stop pressing the FWD button to stop advancing the count.

Reversing the counter readout
Press the shutter release button during playback to interrupt the playback. Then press the REV button. The counter readout will reverse as long as the REV button is held down. (No sound is played during this step.) Stop pressing the REV button to stop reversing the count.

Restarting playback
Press the shutter release button again. The image indicated on the counter will begin playing.

Erasing Images

This section explains how to erase recorded images. There are two methods of erasing images: single-image erasing, for erasing selected images individually; and initialization, which erases all images in a memory drive at one time.

The image-erasing sequence

The following is a brief explanation of the procedures for erasing images:

Turn the power on.
Slide the main switch of the camera to [PLAY (PC)].

Designate a memory drive.
If a memory card is installed in the camera, you can designate either the memory card or the built-in memory as the image source.

Select a image.
Press the FWD button or REV button to select a single image to be erased.

Erase the image.
The image is erased.
For information on single-image erasing, see p. 55.
For information on initialization, see p. 57.

Single-image erasing

The following explains how to erase a selected image.

Note: Erased images cannot be recovered. Carefully confirm the content of a image before erasing it.

● **Slide the main switch to [PLAY (PC)].**

❷ **Press the SELECT button for approximately one second to select the desired memory drive.**

Important:
Check the symbol indicated on the display panel again to confirm that the correct memory drive is selected.
[IN] .... Built-in memory
[CARD] ...... Memory Card

3 Press the REC MODE/ERASE button until EraSE appears on the display panel.

4 Press the FWD button or the REV button to select the image to be erased.
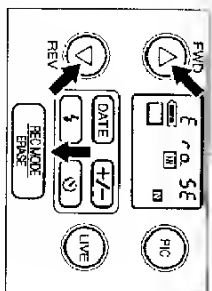
Notes:
• To exit erase mode, press the REC MODE/ERASE button again. Confirm that EraSE no longer appears on the display panel.
• Continuous Still Pictures and Audio cannot be erased when paused during playback.

5 Press the shutter release button.
The selected image will be erased. Repeat steps 4 and 5 to erase another image.
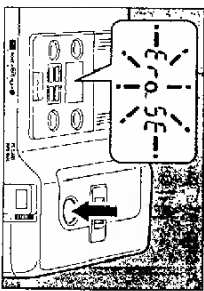
Notes:
• When a image is erased, the image numbers of succeeding images decrease by one.
• The time required to erase a image varies depending on the type of memory card used and the type of image recorded.

Exiting from erase mode
Press the REC MODE/ERASE button again.

Initialization (Erasing all images)

To erase all images in a memory drive, select the drive and initialize it.

Note: Erased images cannot be recovered. Carefully confirm the content of a image before erasing it.

1 Slide the main switch to [PLAY (PC)].

2 Press the SELECT button for approximately one second to select the desired memory drive.

Important:
Check the symbol indicated on the display panel again to confirm that the correct memory drive is selected.
[IN] .... Built-in memory
[CARD] ..... Memory Card
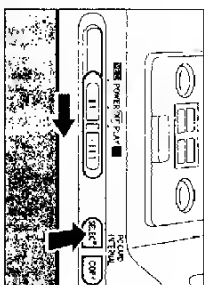
3 Open the side cover of the camera and press the Format button with the tip of a ball-point pen.
Stop pressing when "Fo" appears on the display panel.

Note: Do not press the Format button with any object that has a sharpened point or is easily broken.

4 Press the shutter release button for at least two seconds to begin initialization.
When initialization is completed, a buzzer sounds, and the counter display on the display panel resets to 0. Initialization is now completed.

Image Playback/Erasing 4
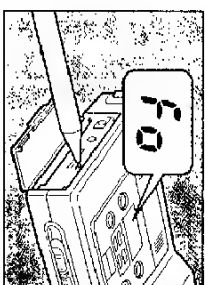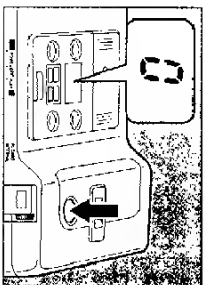
Chapter 5. Additional Information

Connecting to a Personal Computer

Exclusive Attachment Cables and Software for personal computers allow you to directly transmit data from the camera to a personal computer.

Copying Images

This section explains how to copy all images recorded in the internal memory to a Memory Card.

Notes: Images on memory cards cannot be copied to the internal memory.

1 Insert a memory card into the camera.

For details, see p. 16, "Inserting a Memory Card."
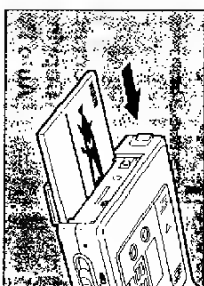
2 Slide the main switch to [PLAY (PC)].

3 Press the COPY button.
COPY appears on the display panel.

To interrupt copying
Press the COPY button again.
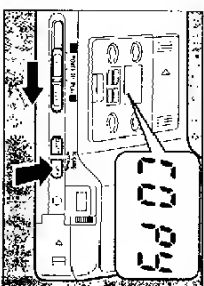
4 Press the shutter release button.
The camera starts copying. A series of illuminated bars (–) appear on the display panel to show the progress of the copying operation.

Notes:
- One bar flashes until all images are copied.
- The indicator on the monitor counts down the copying of each frame.
- As copying progresses, one bar stops flashing but remains illuminated. Another bar then appears on the display panel.
- Once all images have been copied, six bars will have appeared on the panel. The camera then returns to image playback mode.
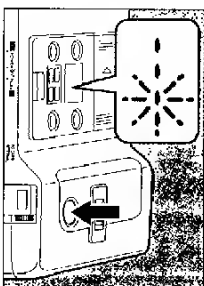
Auto Power-Off and Buzzer Settings

This section explains how to change the Auto Power-Off and buzzer settings.

Setting/canceling Auto Power-Off

If no buttons or levers are operated for approximately 5 minutes while the main switch is set to recording mode or playback mode, temporarily turns off the main power to save power.

■ Canceling Auto Power-Off in Recording Mode

1 Turn the power off. Hold down the DATE button while sliding the main switch to [REC].
A slightly longer buzzer sound indicates that the Auto Power-Off function is canceled.

To reactivate Auto Power-Off
Repeat the above operation. A shorter buzzer sound tells you that the Auto Power-Off function is activated.
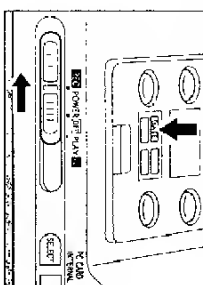
■ Canceling Auto Power-Off in Playback Mode

1 Turn the power off. Hold down the DATE button while sliding the main switch to [PLAY (PC)].
A slightly longer buzzer sound tells you that the Auto Power-Off function is canceled.

To reactivate Auto Power-Off
Repeat the above operation. A shorter buzzer sound tells you that the Auto Power-Off function is canceled.
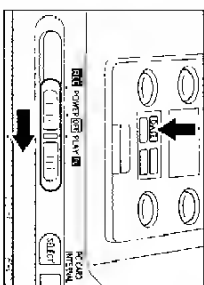
Notes: If the display panel is turned off by the Auto Power-Off system, turn on the power again.

Additional Information **5**

Turning the buzzer on or off

The camera makes a buzzer sound to confirm each recording operation. To cancel the buzzer, follow the instructions below.

● **Slide the main switch to [PLAY (PC)] and press down the LIVE button for more than 5 seconds.**

A short buzzer sound tells you that the buzzer is turned off.

Note: The warning buzzer is not canceled.

Reactivating the buzzer
Repeat the above operation. A slightly longer buzzer sound confirms that the buzzer is activated.
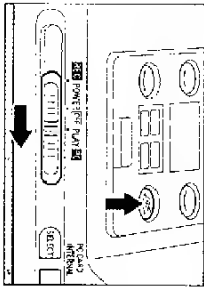
Using your Digital Camera in other countries

Ricoh AC-2 AC Adapter (optional)
• The AC-2 AC Adapter adjusts automatically to voltages ranging from 100 to 240 VAC and frequencies of 50 Hz and 60 Hz.
• Some countries have electrical outlets of different shapes. Before leaving on a trip, obtain the necessary plug adapter from a travel agent or electronics store.

Viewing the images via TV Monitor

• Make sure to check if the TV monitor is NTSC.
• The NTSC format is used in the following Countries:

American Samoa	Haiti
Barbados	Honduras
Bermuda	Mexico
Bolivia	Micronesia
Canada	Myanmar
Chile	Nicaragua
Columbia	Panama
Costa Rica	Peru
Cuba	Philippines
Democratic People's Republic of Korea	Puerto Rico
Dominica	Suriname
El Salvador	Taiwan
Equador	Trinidad and Tobago
Guam	USA
Guatemala	Venezuela

System Configuration Chart

Ricoh RDC-2 Digital Camera

Remote control
Ricoh DR-2 Remote Control Unit

Recording
- Camera's internal memory
- Memory Card (ATA-compliant) (Ricoh FA-5/FA-10/FA-20)
  - Various kinds of memory cards are available commercially. See p. 14 for information on compatible memory cards.

Power supply
- Ricoh AC-2 AC Adapter

Batteries
- AA alkaline batteries
- NiCad batteries
- NiMH batteries

File Transmission to a PC
- RICOH Utility Software (WIN/MAC)
- Serial Cable (WIN/MAC)

Playback
- Ricoh DM-2 LCD Monitor
- TV monitor (Connects to the camera with the AV cable provided.) (NTSC ONLY)
  - A video printer can be connected to the camera for printing still pictures.

Output
Color printer

Color copier

Accessories
Ricoh SC-2 Hard Case
- See "Optional Accessories" on p. 66 for information on all Ricoh products mentioned above (except the Digital Camera).

Supplying power
Install common AA alkaline batteries. Alternatively, rechargeable NiCad batteries or NiMH batteries can be used. For extended use, the Ricoh AC Adapter is recommended.

Recording
The camera's internal memory ensures that the camera is always ready to record. No memory card is required. For high-volume recording, however, Ricoh's high-performance PCMCIA Memory Cards offer convenient storage options.

Viewing
You can connect the camera to an LCD Monitor to immediately play back Still Pictures, Still-Pictures with Audio, Pictures, Still-Pictures with Audio, Audio, and Continuous shots. With the supplied AV Cable, you can connect the camera to a TV monitor to view a recorded image immediately. (NTSC only)

Image transmission to a PC
You can transmit your images to a PC with connector cable included as the interface between the camera and PC. You can also transmit data recorded on a memory card simply by inserting the card directly into the PC card slot of a personal computer. The PC card slot is a popular feature of many notebook PCs.

Output
Once data is sent to your PC, you can print it with a color printer or color copier.

5

Accessories for RDC-2

Item	Model	Remarks
AC Adapter	AC-2	For operating on household AC current. See p. 13, "Operating on AC Power."
LCD Monitor	DM-2	A removable LCD Monitor. See p. 49, "Connecting an LCD Monitor."
Hard case	SC-2	Storage and carrying case for the camera and LCD Monitor.
Remote Control Unit	DR-2	For recording or playback by remote control. Features a programmed playback function (a presentation tool that enables you to program the sequence of pictures to be played back). This function is available only with this Remote Control Unit.
5-MB Memory Card	FA-5	ATA-compliant memory card with flash memory. Capacity: 5 MB.
10-MB Memory Card	FA-10	ATA-compliant memory card with flash memory. Capacity: 10 MB.
20-MB Memory Card	FA-20	ATA-compliant memory card with flash memory. Capacity: 20 MB.

Note: To use an ATA-compliant flash memory card on a PC, you need a driver for ATA cards. Generally, PCs with PC card slots have such a driver. Install this driver for ATA memory cards in your PC before you use a memory card in your PC the first time.

• The corporate names and brand names stated above are trademarks or registered trademarks of their respective corporations.

Handling Precautions

• This camera is not waterproof. Take great care of avoid water, rain or spilled drinks.
• Never drop the camera or subject it to strong shock.
• To avoid overheating the system, do not continuously fire the built-in Flash more than necessary.
• Protect the camera from sand or dust, especially at the beach or in dusty environments.
• Do not expose the camera to high temperatures or high humidity for a long period, such as in a closed vehicle, a bathroom, or on the beach.
• Turn off the camera before connecting it to the optical AC Adapter.
• Sudden changes of temperature may cause condensation to form inside and outside the camera body and lens, resulting in malfunctions. In such conditions, put the camera into a bag or plastic bag temporarily to moderate any drastic change of temperature. Keep it in the bag until the temperature difference is minimized.

Condensation occurs when:
• the camera is suddenly brought into a warm place from a cold place;
• the camera is used in high humidity.

Additional Information **5**

Caring for Your Digital Camera

■ Camera Care

- Keep the lens of the camera clean, as stains or dirt on the lens may degrade the precision of the auto-focus mechanism.

- Do not attempt to remove dust or smears from the lens or the viewfinder with your fingers. Use a blower to blow the dust away, or wipe the surface gently with a soft cloth.

- After using the camera at the beach or exposing it to a chemical environment, take special care to wipe off any dirt.

- If the camera does not opperate properly, contact a Ricoh service center. The camera is equipped with a hazardous high-voltage circuit; never attempt to repair it yourself.

- Keep the camera away from volatile liquids such as thinner, benzene and insecticide, as these chemicals may peel off the paint or damage the surface.

- Keep input/output jacks clean to avoid malfunctions. Wipe them carefully with a dry cloth.

- Before cleaning the camera, slide the main switch to [POWER (OFF)].

■ Safekeeping

- Do not store the camera in a closet with insect repellents, as these may damage the camera and cause a malfunction.

Troubleshooting

Before sending the unit in for repairs, first refer to the following checklist for a possible solution to the problem. If you still cannot correct the problem, please contact the store where you purchased the product.

■ Power Source Problems

Problem	Probable Cause	Remedy	Reference page
No power	Batteries are not positioned properly or are depleted.	Reposition the batteries correctly or replace with fresh batteries.	P.11
	AC Adapter is not connected properly.	Reconnect the AC Adapter.	P.13
Sudden loss of power	Auto Power-Off system shut down the camera after several minutes of inactivity.	Touch the shutter release button lightly or turn on the power again.	—
	Batteries are depleted.	Replace with fresh batteries.	P.11
Batteries go dead quickly.	Batteries were subjected to excessively low or high temperatures.	—	—
	LCD Monitor was used for a long time.	—	—
	Built-in Flash was used too many times because of dark conditions or other reasons	—	—

■ Shooting and Playback Problems

Problem	Probable Cause	Remedy	Reference page
Fails to record picture when shutter release button is pressed.	Batteries are not inserted properly (incorrect polarity) or are dead.	Reposition the batteries correctly or replace with fresh batteries.	P.11
	Power is off, or the main switch is set to [PLAY (PC)].	Slide the main switch to [REC].	P.23
	The shutter release button is not fully pressed down. (Button was pressed only halfway down).	Press the shutter release button all the way down	P.30, P.31
	When the internal memory is designated as the memory drive:	Delete (or copy and delete) some images to secure enough space.	P.55
	Internal memory is full.		
	When the memory card is designated as the memory drive:	Insert the memory card again.	P.16
	Memory Card is not inserted properly		
	Memory Card is not initialized.	Initialize the card.	P.16
	Memory Card is write-protected.	Write-enable the memory card.	—
	Memory Card is full.	Delete some images or replace with a new memory card.	P.55, P.16
	Memory Card is expired.	Replace with a new memory card.	P.16
	Self Timer mode is selected	Press the Self Timer mode button to cancel/Self Timer mode.	P.42
	Audio mode is selected.	Press the REC MODE/ERASE button to cancel Audio mode.	P.38
	Built-in Flash is recharging	Wait until the Flash-ready light stops flashing.	P.31

Problem	Probable Cause	Remedy	Reference page
Auto-focus does not focus on subject.	Lens is dirty.	Clean the lens.	P.1
	Subject is not in the center of the Auto-focus frame.	Use Focus Lock or LIVE monitoring mode.	P.43
	Difficulty focusing on subject.	Take the picture using Focus Lock.	P.43
Actual image differs greatly from image viewed through viewfinder.	Distance to subject is less than 25 cm (10 in).	Use LIVE monitoring function or macro shooting technique.	P.44, P.46
Flash does not work or recharge.	Camera not set to Still Picture Mode.	Press REC MODE/ERASE button to select Still Picture Mode.	P.26
	Flash-off mode is selected.	Press Flash mode button to cancel setting.	P.40
	Batteries are dead	Replace with fresh batteries.	P.11
Flash discharged properly but image is dark.	Distance to subject exceeds 5 meters (16 ft.)	Reduce distance to subject.	—
Picture is too bright.	Image is overexposed.	Compensate exposure with EV button.	P.33
Image is underexposed.	Picture was taken in Flash-off mode under dark conditions.	Press Flash mode button to cancel setting.	P.40
	Image is underexposed	Compensate exposure with EV button.	P.33
Picture does not show natural colors.	Image conditions prevent automatic white balance system from functioning properly.	Include a while or light-colored object in the subject, or use flash for fill.	P.33
Fails to record audio data	Power is off or the main switch is set to [PLAY (PC)].	Slide the main switch to [REC].	P.23
	Camera is not in Audio mode.	Press the REC MODE/ERASE button to select Audio mode.	P.38
	Battery polarity is reversed or batteries are dead.	Reposition the batteries correctly or replace with fresh batteries.	P.11
	Shutter release button is not fully pressed down (button is pressed only halfway down)	Press the shutter release button all the way down	P.38
When the internal memory is selected as the memory drive:	Internal memory is full.	Delete some images to free up sufficient memory space.	P.55
When the memory card is selected as the memory drive:	Memory Card is not properly inserted.	Reinsert the memory card.	P.16
	Memory Card is not initialized.	Initialize the card.	P.16
	Memory Card is write-protected	Write-enable the memory card.	—
	Memory Card is full.	Delete some images or replace with a new memory card.	P.55, P.16
	Memory Card is expired	Replace with a new memory card.	P.16

Problem	Probable Cause	Remedy	Reference page
Fails to play back image data or display an image on the monitor.	The main switch is not set to [PLAY (PC)].	Slide the main switch to [PLAY (PC)].	P.52
	Proper memory drive is not selected	Press the SELECT button to select the correct drive.	P.52
When the memory card is selected as the memory drive:	Memory Card is not properly positioned or contains no images	Reposition the memory card or replace with a memory card containing recorded images.	P.16
	Memory Card was not initialized in this camera.	Insert a correctly formatted memory card.	P.16
	Memory Card contains improperly recorded data.	Insert a memory card with properly recorded data.	P.16
	Only Audio play back	—	—
Image does not play back clearly.	Electric motors or other devices near the camera produce electromagnetic interference.	Move camera away from interfering devices.	—
	LCD Monitor is not correctly mounted.	Mount the LCD Monitor correctly on the camera	P.49
	AV cable is not correctly connected to the AV output jack of the camera and the input jack of the TV monitor.	Connect AV cable correctly.	P.48
	Memory Card is faulty	Insert another card containing recorded images. If this card functions correctly, the camera is not malfunctioning. However, original memory card is probably defective. Discard this memory card.	—
	Malfunction of camera's Internal memory	Back up any important images in the internal memory with the image copying function. Then initialize the Internal memory.	P.62, P.16
The image on the monitor has disappeared.	Batteries are dead.	Replace with fresh batteries.	P.11
	Auto Power-Off system has activated	Slide main switch to [POWER (OFF)] and restart playback.	P.52
Remote Control Unit (optional) is malfunctioning	Path between reception window of the camera and the transmission window of the Remote Control Unit is obstructed.	Clear the path between the camera and the Remote Control Unit.	—
	The reception window on camera or transmission window on the Remote Control Unit is dirty.	Clean both windows.	P.1
	Lithium battery in the Remote Control Unit is dead.	Replace with a fresh lithium battery (CR2032).	—

Additional Information 5

■ Other Problems

Problem	Probable Cause	Remedy	Reference page
Memory Card cannot be inserted in camera.	Memory Card does not meet required specifications.	Insert a recommended memory card	P.14, P.16
	Memory Card is upside down or backward.	Insert the memory card correctly.	P.16
Camera buttons and switches do not function.	Batteries are dead.	Replace with fresh batteries.	P.11
	Camera does not function properly.	Slide the main switch of the camera to [POWER (OFF)], and then slide it back to [REC] or [PLAY (PC)]. If the camera still fails to function properly, try the following: 1. Remove and reinstall all batteries in the camera. 2. Slide the main switch to [REC] or [PLAY (PC)] again.	—
Viewfinder is out of focus.	Diopter is not properly adjusted.	Adjust the diopter with the Diopter control.	P.19
Date is incorrect or the date display is flashing.	The correct date and time have not been set.	Reset the time and date correctly.	P.18
The date display is turned off.	Batteries are dead, or batteries were removed from camera for more than two weeks.	Replace with fresh batteries and reset the date. • Do not remove the batteries immediately after resetting the date. Batteries must remain in camera for at least 10 hours before being removed to prevent date memory from being erased.	P.11, P.18
Fails to erase a image or initialize a memory card.	Main switch is not set to [PLAY (PC)].	Slide main switch to [PLAY (PC)].	P.55, P.57
	Memory Card is write-protected.	Write-enable the memory card	—
Camera changes to a mode other than the one selected.	Continuous images or audio images are paused during playback.	Resume and complete playback.	P.53, P.54
	Power was shut off manually or the Auto Power-Off system shut down the camera.	Select the mode again.	—
Counter indicated 2 pictures even though only 1 was taken.	Batteries were removed.	Select the mode again.	—
	Memory underwent more than 4,000 record/erase cycles without being initialized.	Initialize the memory drive.	P.57
Auto Power-Off system does not work.	Auto Power-Off system was canceled	Confirm Auto Power-Off system settings.	P.61
Buzzer does not sound.	Buzzer was shut off.	Confirm buzzer settings.	P.62

Servicing

1. The Ricoh RDC-2 camera is backed by a one-year limited warranty. During the warranty period, which starts from the date of purchase, any defective parts will be repaired free of charge. In the event of a camera malfunction, contact the dealer where you purchased the camera or contact the nearest Ricoh Service Representatives. Please note that you will be charged for the cost of shipping the camera from the Ricoh service center to you.

2. This warranty does not cover any damage resulting from:
   ① failure to follow the instructions in this instruction manual;
   ② repair, modification or overhaul not conducted by authorized service station specified in this instruction manual;
   ③ fires or natural calamities;
   ④ improper storage, such as exposing the camera to high temperatures, humidity, or insect repellents; storing it with leaking batteries; storing the camera in a dirty condition so that it becomes moldy; or otherwise insufficiently caring for the camera.
   ⑤ submergence; exposure to floods or spilled alcoholic or non-alcoholic beverages; allowing sand or mud to enter the camera; exposure to physical shocks; or dropping of the camera.

3. After a full year has passed from the purchase date, you will become responsible for all repair fees, including those incurred at authorized service stations.

4. You will be responsible for all repair fees, even within the warranty period, if the warranty card is not attached or if the distributor's name or the purchase date have been changed or are not indicated on the card.

5. Expenses for overhauls and thorough inspections as a result of your special request will be charged to you, whether or not they occur during the warranty period.

6. This warranty only applies to the camera and not to the accessories such as the hard case and wrist strap, nor does it apply to the consumables provided, such as batteries.

7. Whether during the warranty period or not, any consequential damage arising from the failure of this camera, such as expenses for taking pictures or loss of expected profit, will not be reimbursed.

8. The above provisions are in regard to repairs offered free of charge, and do not limit your legal rights. The intention of the above provisions are also described in the warranty card provided with this camera.

9. Parts essential to the servicing of this camera - that is, components required to maintain the functions and quality of this camera - will be available for a period of seven years after the camera is discontinued. However, as some of those parts are kept for a longer period, do not hesitate to contact your distributor or the nearest Ricoh service center even after the 7-year period.

10. Please note that, if seriously damaged from flooding, submergence, infiltration of sand or mud, violent shocks or dropping, the camera may not be repairable, and restoration to its original condition may be deemed impossible.

Additional Information **5**

Notes: Before sending the camera in for repair, check the batteries and read this instruction manual again to ensure proper operation.

- *Some repairs requires a significant amount of time to be completed. Please allow sufficient time for the repair.*
- *When sending the camera to a service representative, please include a note describing the defective part and the problem as precisely as possible.*
- *Remove all accessories not related to the problem before sending the camera to a service representative.*
- *Before taking any important pictures (such as at weddings, on trips abroad, etc.), test the camera to learn and ensure proper functioning. We recommended that you keep this manual and fresh batteries on hand.*

Specifications

■ **General**

Video signal method	: NTSC
Power requirement	: Batteries: 6 V
	AC: 5 V
Dimensions (W × H × D)	: 143 (5.6) × 27 (1.1) [36 (1.4) incl. grip] ×76 (3) mm (in.)
Weight	: approx. 285 g (10.1 oz.) without batteries
Operating temperature range	: 0°C to 40°C
Storage temperature range	: −20°C to 60°C

■ **Main system**

CCD	: 1/4", 410,000 pixels (effective 380,000 pixels) with complementary color checkers

Lens

- Focal length	: 1.5 x, Bi-focal, F:2
Wide angle	: f:3.7 mm (equiv. to 35 mm on a 35-mm camera)
Standard: f	: 5.6 mm (equiv. to 55 mm on a 35-mm camera)
- Shooting range	
Wide angle	: 0.01 m — ∞
Standard	: 0.03 m — ∞
Composition	
Wide angle	: 6 elements in 6 groups
Standard	: 8 elements in 8 groups

Viewfinder

- Type	: Relay-type real image bi-focal finder
- Magnification	
Wide angle	: 0.63
Standard	: 0.42
Field-of-view coverage	: 80% minimum
Diopter adjustment	: −3.5 to +0.5 dpt

White balance

- Color temperature of standard setting	: 4300 + 50K − 50K
- Automatic adjustment range: 2800K-6500K	

Exposure adjustment

- **AE range: EV 9-EV 17**
- **Light measuring system** : Centerweighted
- **EV memory system** : With automatic backlight control program (AE is locked when shutter release button is held halfway down.) Manual exposure adjustment range +-1.5 EV (in 0.3 EV increments)
- **Exposure mode** : Program AE
- **Exposure measurement** : TTL CCD method

- AE with flash : Included
- Shutter speeds : Still Picture (mechanical): 1/8-1/1000

Focusing
- AF method : TTL CCDAF method
- AE range : 0.01 m (0.03 ft.) – ∞
- Pre-focus system : Focus is locked when shutter release button is held halfway down.

- Focusing : Green LED in viewfinder
- Manual focusing : Adjust with the FWD/REV buttons, while shutter release button is held halfway down. (Also operational with the Remote Control Unit.)

■ Built-in flash
- Method : Automatic
- Charging starts : Automatic
- Charging stops : Automatically when fully recharged
- Recharging monitor
  Recharging : Red light flashes in viewfinder
  Fully recharged : No red light in viewfinder
- Interval between flashes : 5 seconds max.
- Effective distance
  Wide angle : Max. 5.0 m (16.4 ft.)
  Standard : Max. 5.0 m (16.4 ft.)
- Operating modes : Automatic/on/off

■ Image recording
Color method : NTSC-compatible
Image format : JEIDA DSC 68-pin standard
  VIDEO1-compatible
Compression method : JPEG-compatible
Compression ratio
• Still picture
  Economy mode : 1 bit/pel (48 kB/frame)
  Normal mode : 2 bit/pel (96 kB/frame)
  Fine mode : 4 bit/pel (192 kB/frame)
Still Picture image quality : 768 x 576
Document Mode : Gamma characteristics optimized
Continuous speed : Approx. 1 image/second

■ Audio recording
Image format : JEIDA DSC 68-pin
  SOUND1-compatible
Sampling frequency : 8 KHz
Compression method : ITU-T G.721 ADPCM method
Compression ratio : 1/2

Audio recording time
• With still picture : 10 seconds
• Audio only
  With 20-MB memory card : 86 min. 33 sec. max. (in 1-second steps)
  With internal memory : 7 min. 46 sec. max. (in 1-second steps)

■ Input/Output
Connectors for monitor
• Socket : Specially designed 9-pin socket (gold-plated)
• Video output : 1.0 Vp-p (1 K Ω)
• Audio output : –7.5 dBs (10 K Ω)
Other specific terminals : Power supply input terminal
  Video terminal (with audio)
  RS-232C/AUX terminal

■ Camera body
Tapped Hole for Tripod : 1/4-20 UNC
  5.5 mm (0.2 in.) max. bolt length

■ Power supply
Batteries : AA alkaline batteries
  AA NiMH batteries
  AA NiCad batteries
Voltage
Batteries : 6 V (1.5 V × 4 cells)
  AC Adapter: 5 V
Auto Power-Off system : Activates when camera is not used for approximately 5 minutes.

■ Memory Cards for recording/playback
With flash memory
Type I and Type II, ATA-compliant : PCMCIA 2.1/JEIDA 4.2
  Capacity: 40 MB
• With common memory write cycle of 300 ns or less
  AIMS-compliant: Type 1, PCMCIA 2.1/JEIDA 4.2
  Capacity: 24 MB

Additional Information 5

Memory Storage Capacity

The following tables show the data recording capacity for each image image quality and recording mode.

■Internal memory

Recording Mode	Image quality		
	F Mode	N Mode	E Mode
Still Picture Mode	9 frames	19 frames	38 frames
Still Picture & Audio mode	7 frames **	12 frames *	19 frames
Continuous	9 frames *	19 frames	38 frames
Audio mode	7 min. 46 sec		
Document Mode	9 frames *	19 frames	38 frames

* Plus 2 still pictures in E mode.
** Plus 3 still pictures in E mode.

■Memory Card (ATA-compliant)

Memory Card	Recording Mode	Image quality		
		F Mode	N Mode	E Mode
5 MB (Model FA-5)	Still Picture Mode	25 frames	51 frames	103 frames
	Still Picture & Audio mode	21 frames	36 frames	56 frames
	Continuous	25 frames	51 frames	103 frames
	Audio mode	21 minutes 14 seconds		
	Document Mode	25 frames	51 frames	103 frames
10 MB (Model: FA-10)	Still Picture Mode	52 frames	105 frames	210 frames
	Still Picture & Audio mode	43 frames	74 frames	114 frames
	Continuous	52 frames	105 frames	210 frames
	Audio mode	43 min. 00 sec.		
	Document Mode	52 frames	105 frames	210 frames
20 MB (Model: FA-20)	Still Picture Mode	105 frames	211 frames	422 frames
	Still Picture & Audio mode	87 frames	149 frames	230 frames
	Continuous	105 frames	211 frames	422 frames
	Audio mode	86 min. 33 sec.		
	Document Mode	105 frames	211 frames	422 frames

memo

FCC Notice:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursurant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Properly shielded and grounded cables and connectors must be used for connection to host computer in order to meet FCC emission limits.

IMPORTANT SAFETY INSTRUCTIONS-SAVE THESE INSTRUCTIONS DANGER-TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,CAREFULLY FOLLOW THESE INSTRUCTIONS.

Ricoh Service Representatives ▬

Camera Description (2)

■ Optional LCD Monitor

Speaker

Earphone jack

UNLOCK button (p. 49)
for detaching LCD Monitor
from the camera

LCD panel

Main switch

Volume control

Brightness control

Mount (p. 49)

Sub switch
Press this switch to turn off
power of the monitor (even
when the main switch of the
LCD Monitor is set to ON).

Protective cover
Remove this cover before
mounting the LCD Monitor
on the camera body.

■ Optional AC Adapter

• AC-2

Power cord (p. 13)

Connecting cable (p. 13)

83

■ Camera Body

COPY button (p. 60)

SELECT button (p. 24)

Main switch (p. 23)

Format button (p. 17, 57)

AV output jack (p. 48)

DC input jack (p. 13)

Memory Card slot (p. 16)

RS-232C/AUX terminal

Side cover

Viewfinder (p. 28)

Diopter Adjustment
control (p. 19)

Built-in microphone
(p. 36, 38)

Battery cover (p. 12)

Flash ready light
(red) (p. 29)

Auto-focus light
(green) (p. 29)

Tripod Screw Hole

Card Removal lever (p. 16)

84